44611

ENGLISH BOTANY;

OR,

COLOURED FIGURES

OF

BRITISH PLANTS,

WITH THEIR

ESSENTIAL CHARACTERS, SYNONYMS, AND PLACES OF GROWTH:

TO WHICH WILL BE ADDED,

OCCASIONAL REMARKS.

BY

JAMES EDWARD SMITH, M.D. F.R.S.

MEMBER OF THE IMP. ACAD. NATURÆ CURIOSORUM, THE ACADEMIES OF STOCKHOLM, UPSAL, TURIN, LISBON, LUND, BERLIN, PHILADELPHIA, AND THE NAT. HIST. SOCIETIES OF PARIS AND MOSCOW;
PRESIDENT OF THE LINNÆAN SOCIETY.

THE FIGURES BY
JAMES SOWERBY, F.L.S.

——"VIRESQUE ACQUIRIT EUNDO."—— *Virg.*

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MDCCCX.

GR III.

SYSTEMATICAL INDEX

TO

VOL. XXX.

Monandria.

	Tab.
CHARA gracilis —	— 2140

Triandria.

Aira lævigata — —	— 2102
Avena planiculmis —	— 2141
Arundo Calamagrostis	— 2159
——— stricta —	— 2160

Pentandria.

Peucedanum Silaus —	— 2142
Chærophyllum aureum	— 2103

Hexandria.

Juncus lampocarpus	— 2143
——— obtusiflorus	— 2144
Rumex aquaticus —	— 2104

Decandria.

Spergula saginoides —	— 2105

Polyandria.

Papaver somniferum	— 2145

Didynamia.

Mentha gentilis —	— 2118
——— arvensis —	— 2119
——— agrestis —	— 2120
Stachys ambigua —	— 2089

Tetradynamia.

Brassica Napus —	— 2146

Diadelphia.

Lotus corniculatus	— 2090
——— major — —	— 2091

Syngenesia.

Hieracium maculatum	— 2121
——— denticulatum	— 2122

Monoecia.

Carex Davalliana —	— 2123
——— clandestina —	— 2124

Cryptogamia.

Aspidium cristatum —	— 2125
Sphagnum cuspidatum	— 2092
Phascum strictum —	— 2093
——— stoloniferum	— 2106
——— alternifolium	— 2107
Splachnum rugosum —	— 2094
——— lingulatum	— 2095
Hypnum dubium —	— 2126
——— fallax —	— 2127
——— Crista-castrensis	— 2108
Lepraria latebrarum —	— 2147
——— botryoides —	— 2148
——— virescens —	— 2149
Spiloma microclonium	— 2150
——— tumidulum —	— 2151
Lichen simplex —	— 2152
——— thelostomus —	— 2153
——— albellus —	— 2154
——— cyrtellus —	— 2155
——— subfuscus —	— 2109
——— Glaucoma —	— 2156
——— atro-cinereus	— 2096
——— murorum —	— 2157
——— elæinus —	— 2158
——— microphyllus	— 2128
——— dædaleus —	— 2129
——— conspersus —	— 2097
——— crocatus —	— 2110
——— pinastri —	— 2111
——— rubiformis —	— 2112
——— flavicans —	— 2113
Fucus natans —	— 2114
——— abrotanifolius	— 2130
——— discors —	— 2131
——— ceranoides —	— 2115
——— ulvoides —	— 2134
——— reniformis —	— 2116
——— sarniensis —	— 2132
——— soboliferus —	— 2133
——— glandulosus —	— 2135
Ulva plantaginea —	— 2136
——— ramulosa —	— 2137
Conferva radicans —	— 2138
——— arcta —	— 2098
——— lanosa —	— 2099
——— riparia —	— 2100
——— fœtida —	— 2101
——— fibrata —	— 2139
Tremella albida —	— 2117

ALPHABETICAL INDEX

TO

VOL. XXX.

	Tab.
AIRA lævigata —	— 2102
Arundo Calamagrostis	— 2159
—— stricta —	— 2160
Aspidium cristatum —	— 2125
Avena planiculmis —	— 2141
Brassica Napus —	— 2146
Carex clandestina —	— 2124
—— Davalliana —	— 2123
Chærophyllum aureum	— 2103
Chara gracilis —	— 2140
Conferva arcta —	— 2098
——— fibrata —	— 2139
——— fœtida —	— 2101
——— lanosa —	— 2099
——— radicans —	— 2138
——— riparia —	— 2100
Fucus abrotanifolius	— 2130
—— ceranoides —	— 2115
—— discors —	— 2131
—— glandulosus —	— 2135
—— natans —	— 2114
—— reniformis —	— 2116
—— sarniensis —	— 2132
—— soboliferus —	— 2133
—— ulvoides —	— 2134
Hieracium denticulatum	— 2122
——— maculatum	— 2121
Hypnum Crista-castrensis	— 2108
——— dubium —	— 2126
——— fallax —	— 2127
Juncus lampocarpus —	— 2143
—— obtusiflorus —	— 2144
Lepraria botryoides	— 2148
——— latebrarum	— 2147
——— virescens —	— 2149
Lichen albellus —	— 2154

	Tab.
Lichen atro-cinereus	— 2096
——— conspersus —	— 2097
——— crocatus —	— 2110
——— cyrtellus —	— 2155
——— dædaleus —	— 2129
——— elæinus —	— 2158
——— flavicans —	— 2113
——— Glaucoma —	— 2156
——— microphyllus —	— 2128
——— murorum —	— 2157
——— pinastri —	— 2111
——— rubiformis —	— 2112
——— simplex —	— 2152
——— subfuscus —	— 2109
——— thelostomus —	— 2153
Lotus corniculatus —	— 2090
—— major —	— 2091
Mentha agrestis —	— 2120
——— arvensis —	— 2119
——— gentilis —	— 2118
Papaver somniferum	— 2145
Peucedanum Silaus —	— 2142
Phascum alternifolium	— 2107
——— stoloniferum	— 2106
——— strictum —	— 2093
Rumex aquaticus —	— 2104
Spergula saginoides —	— 2105
Sphagnum cuspidatum	— 2092
Spiloma microclonium	— 2150
——— tumidulum —	— 2151
Splachnum lingulatum	— 2095
——— rugosum —	— 2094
Stachys ambigua —	— 2089
Tremella albida —	— 2117
Ulva plantaginea —	— 2136
—— ramulosa —	— 2137

We ought to have reminded the reader at *p.* 2118 that our former *Mentha gentilis*, *t.* 449, is *gracilis* of *Fl. Brit.* 662, and *Tr. of L. Soc. v. 5.* 210, as quoted in both those places, The pages 402 and 403, given with this *vol.* 30, are designed to supersede those published in *vol. 6*, the plates remaining as they are.

INDEX

OF THE ENGLISH NAMES

IN VOL. XXX.

	Tab.
Bird's-foot Trefoil, common	2090
——— greater	2091
Bog-moss, long-leaved	2092
Carex, dwarf silvery	2124
——— prickly separate-headed	2123
Chara, slender shining	2140
Cole-seed	2146
Conferva, close green	2098
——— creeping dark	2138
——— entangled shore	2100
——— fibrous-branched	2139
——— fœtid pale	2101
——— woolly green	2099
Cow-Parsley, tawny-seeded	2103
Dock, great water	2104
Earth-moss, alternate-leaved	2107
——— branching-rooted	2106
——— upright	2093
Feather-moss, fallacious	2127
——— fine curve-leaved	2126
——— ostrich-plume	2108
Fucus, buck's-horn	2115
——— discordant	2131
——— float	2114
——— Guernsey	2132
——— kidney-shaped	2116
——— laver-like	2134
——— many-branched red	2133
——— red glandular	2135
——— southernwood	2130
Gland-moss, rugged	2094
——— tongue-leaved	2095
Hair-grass, smooth-sheathed	2102
Hawkweed, small-toothed	2122
——— stain-leaved	2121
Laver, green sharp	2137
——— plantain-leaved	2136
Lepraria, common green	2148
——— dull-green	2149
——— grey cavern	2147
Lichen, ashy-black	2096
——— brass-wire	2113
——— brown-shielded crust	2109
——— cream-coloured	2154
——— fine-lobed imbricated	2129
——— golden pine	2111
——— greenish chesnut-shield	2097
——— nipple-shielded	2153
——— orbicular olive	2158
——— raspberry-fruited	2112
——— simple black	2152
——— small-leaved cushion	2128
——— tumid brown-shielded	2155
——— wall-eyed	2156
——— yellow-veined	2110
——— yellow wall	2157
Mint, bushy red	2118
——— corn	2119
——— rugged field	2120
Navew	2146
Oat-grass, flat-strawed	2141
Poppy, white	2145
Rape-seed	2146
Reed, small	2159
——— smallest close	2160
Rush, blunt-flowered	2144
——— shining-fruited	2143
Shield-fern, lesser crested	2125
Spiloma, fine-branched	2150
——— scarlet	2151
Spurrey, smooth awl-shaped	2105
Sulphur-wort, meadow	2142
Tremella, whitish	2117
Woundwort, ambiguous	2089

Nov 1809 published by J.S. Sowerby London.

STACHYS ambigua.

Ambiguous Woundwort.

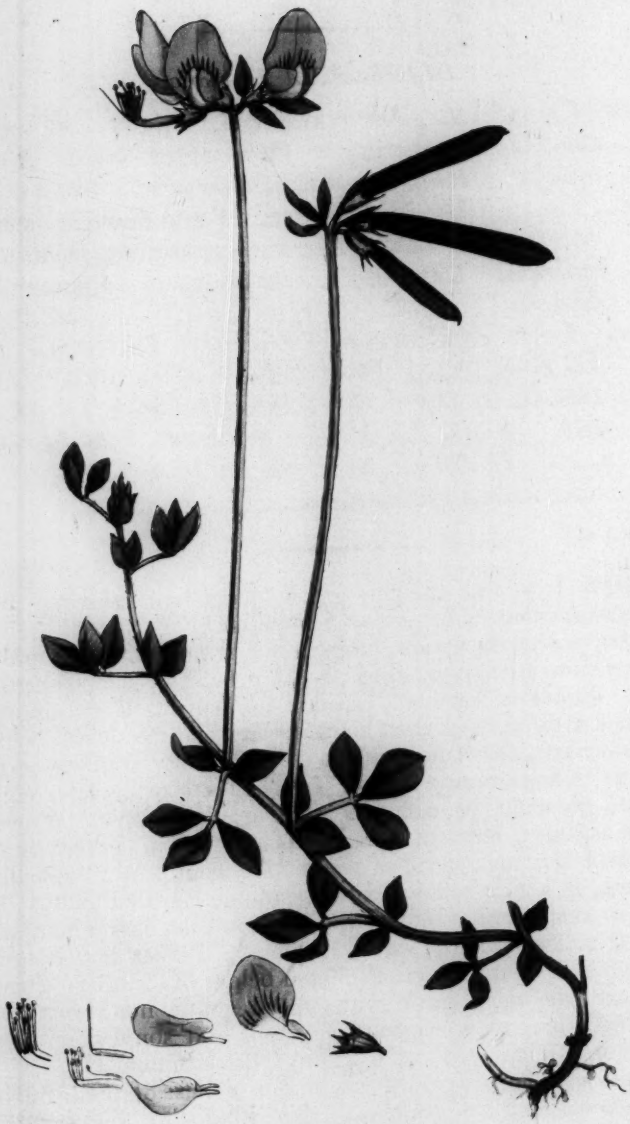
DIDYNAMIA Gymnospermia.

GEN. CHAR. *Cal.* 5-cleft, awned. Upper lip of the *corolla* vaulted; lower reflexed at the sides, the large middle segment notched. *Stamens* when old bent outwards.

SPEC. CHAR. Six flowers in a whorl. Leaves oblong, heart-shaped at the base, on footstalks. Stem hollow.

THE specimen in our plate was gathered in the Orkneys, where this plant is very abundant in potatoe fields and other cultivated ground, by Mr. W. Borrer and Mr. W. J. Hooker, who also found the same near Loch Carron and in Glen Ely in the north of Scotland, in September 1808. We have received in August 1809 a specimen, gathered by Mr. J. R. Weatherhead in a boggy place at the foot of one of the Pentland hills near Edinburgh, of the same plant in a less luxuriant state, about a foot high, with much narrower and more silky leaves, and a scarcely spotted flower. This latter approaches nearer to *S. palustris*, *t.* 1675, from which however it differs in its stalked leaves, which are not dilated at their base, and in having a faint degree of the peculiar fœtid smell of *S. sylvatica*. Mr. Hooker's and Mr. Borrer's specimens more approach this latter, but the stem is hollow, (as Mr. Weatherhead well observes in his), not filled up with pith as in *sylvatica;* the leaves are oblong, not rounded, though slightly heartshaped at the very base. The root is white and creeping. Hairs on the stem more or less deflexed. Corolla with a variegated lip in general, though sometimes very slightly so. Stem perfectly straight at the base, and about as high as that of *S. sylvatica*.

S. alpina, which we at first suspected our plant might be, differs from all the above-mentioned in the great breadth and bluntness (with a point) of the segments of its calyx, which are strongly reticulated when in seed.



Decemb.ª 1.st 1794 published by J.t Sowerby, London

LOTUS corniculatus.

Common Bird's-foot Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Legume* cylindrical, straight. *Wings* of the *corolla* cohering by their upper edge. *Calyx* tubular. *Filaments* dilated upwards.

SPEC. CHAR. Heads depressed, of few flowers. Stems decumbent, solid. Legumes spreading, nearly cylindrical. Claw of the keel obovate. Filaments all dilated.

SYN. Lotus corniculatus. *Linn. Sp. Pl.* 1092. *Sm. Fl. Brit.* 793. *Huds.* 329. *With.* 656. *Hull.* 166. *ed.* 2. 218. *Relh.* 291. *Sibth.* 231. *Abbot.* 164. *Curt. Lond. fasc.* 2. *t.* 56. *Mart. Rust. t.* 53. *Fl. Dan. t.* 991. *Dicks. H. Sicc. fasc.* 17. 7.
L. corniculata glabra minor. *Raii Syn.* 334.

VERY common in open grassy pastures, flowering from June to the end of August or September.

Root perennial, woody, long, much branched at the summit. Stems numerous, spreading on the ground in every direction, solid, simple or branched, various in length, leafy, angular, clothed with close-pressed hairs, as are also the leaves, which are alternate, ternate, with a pair of leafy stipulas at the base of their common stalk. The leaflets are obovate, acute, entire, glaucous beneath; the lateral ones oblique. Flower-stalks axillary, solitary, 5 times as long as the leaves, angular, each bearing a head of about 3, or from 2 to 5, spreading flowers, of a fine yellow, turning orange as they fade. The keel is striped with red at the base, and its claw remarkably dilated and rounded upwards, as Mr. W. Borrer first observed to us. The filaments are all dilated below the anther. Spaces between the calyx-teeth rounded. Legume not exactly cylindrical, but, as it ripens, depressed and somewhat channelled above, smooth, of a shining purple brown.

That excellent agriculturist and worthiest of men the late Dr. Anderson, recommended this plant, by the name of Milk-vetch, for cultivation, as producing a great quantity of fodder, and making excellent hay. It seems not to have come into use.

Dec 1 1809 publishd by J.t Sowerby London.

LOTUS major.

Greater Bird's-foot Trefoil.

DIADELPHIA Decandria.

GEN. CHAR. *Legume* cylindrical, straight. *Wings* of the *corolla* cohering by their upper edge. *Calyx* tubular. *Filaments* dilated upwards.

SPEC. CHAR. Heads depressed, many-flowered. Stems erect, hollow. Legumes spreading, cylindrical. Claw of the keel linear. Shorter filaments not dilated.

SYN. Lotus major. *Scop. Carn. v.* 2. 86.

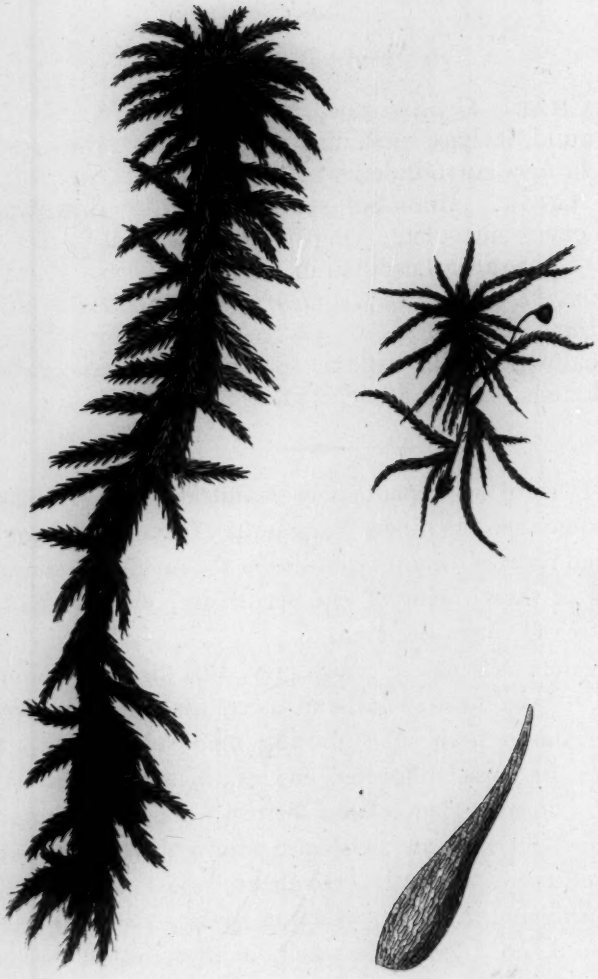
L. corniculatus γ and δ. *Sm. Fl. Brit.* 794.

L. corniculatæ major species. *Raii Syn.* 334. *Bauh. Hist. v.* 2. 355.

L. pentaphyllus medius pilosus. *Dill. in Raii Syn.* 334.

THIS, which Scopoli long ago distinguished as a species, we are induced, by many recent observations, to admit as such. It is common among bushes on a wet spongy soil, in osier-grounds and moist hedges. The stems are from one to two or three feet high, upright, hollow, more or less clothed with long loosely-spreading hairs. Leaves also fringed with similar hairs. Flowers from 6 to 12 in each head, of a duller orange than the former. Calyx-teeth stellated when young, hairy; the spaces between them, as the Rev. Dr. Beeke observes, are narrow and acute, not rounded. Claw of the keel almost linear, by no means rounded or expanded. Shorter filaments not dilated under the anther like the longer ones, a character pointed out by Scopoli. Pod slender, and exactly cylindrical. All these differences are surely sufficient, and indeed the plant is, at first sight, so different from the common *L. corniculatus*, that nothing can be more readily recognized.

2092.



Drawn & published by J.ª Sowerby London.

SPHAGNUM cuspidatum.

Long-leaved Floating Bog-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* sessile, without a fringe. *Veil* cut round, its base remaining on the base of the capsule. *Anthers* surrounded with a ring.

SPEC. CHAR. Branches spreading rather downwards. Leaves lanceolate, long-pointed, waved, lax.

SYN. Sphagnum cuspidatum. *Hoffm. Germ. v.* 2. 22. *Sm. Fl. Brit.* 1147. *Ehrh. Crypt.* 251. *Turn. Musc. Hib.* 6.

S. palustris mollis deflexi, squamis capillaceis, varietas fluitans. *Dill. Musc.* 244. *t.* 32. *f.* 2. B.

MOST usual in mountainous countries, but Mr. Turner gathered our specimen near Yarmouth. It grows floating in pools and rivulets, bearing capsules in the middle of summer. For one of these, being of rare occurrence, we have had recourse to a German specimen.

The colour is a pale greenish grey, like the more common species, *t.* 1405, 1406; but the stems are much more elongated than in those, from their floating mode of growth. The branches are loosely directed downward, and more or less pointed. Leaves lanceolate, flattish, loosely spreading, lengthened out into an awlshaped point; their edges wavy, their substance elegantly reticulated, most like those of *S. capillifolium*, *t.* 1406. Capsule ovate, short, at length bell-shaped, on a long stalk which is thickened at the summit as in the other species. It must be observed however that this is a real flower-stalk; not a fruit-stalk, elevating the germen above the base or receptacle of the flower, as in all other known genera of mosses. The learned Mohr and Weber have remarked that the capsule is truly sessile in *Sphagnum*, and in that alone.

PHASCUM strictum.

Upright Earth-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Capsule* ovate, without any separate lid, deciduous. *Veil* minute, deciduous.

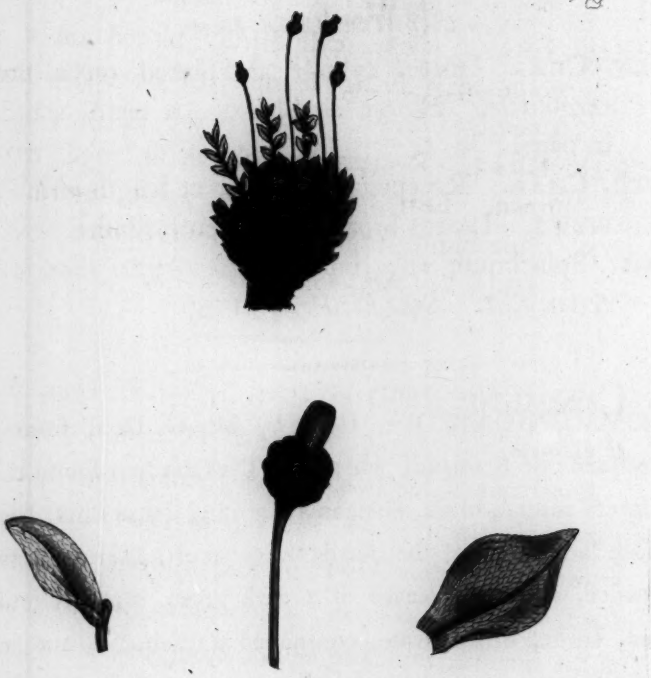
SPEC. CHAR. Stem very short. Capsule ovate. Leaves awl-shaped, upright, straight, slightly serrated.

SYN. Phascum strictum. *Dicks. Crypt. fasc.* 4. 1. *t.* 10. *f.* 1. *Sm. Fl. Brit.* 1151.

MR. DICKSON only seems to have gathered this species of the minute genus *Phascum*, and we are obliged to him for the specimens described in the *Flora Britannica*, and delineated here. He mentions alpine bogs in Scotland as its native station.

The root is annual, fibrous, tufted. Plants not a line in height, with scarcely any stem, growing in tufts, of a dark, dull, or blackish, green. Leaves several, erect, straight, or slightly incurved, awl-shaped, single-ribbed, reticulated, furnished towards the point with a few shallow serratures, visible only by the help of a high magnifier. Fruit-stalk solitary, erect, short. Capsule ovate, dark brown when ripe, greatly overtopped by the leaves.

2074



Zoe: 1109 published by J.t Sowerby Lambeth.

SPLACHNUM rugosum.

Rugged Gland-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* cylindrical, placed on a fleshy *receptacle. Fringe* simple, of 16 teeth, standing in pairs.

SPEC. CHAR. Receptacle globose, at length wrinkled, brown. Leaves broad-ovate, acute, entire.

SYN. Splachnum rugosum. *Dicks. Crypt. fasc.* 4. 3, *t.* 10. *f.* 7. *Sm. Fl. Brit.* 1173.

COMMUNICATED in 1803, by Mr. G. Don, from the Highlands of Scotland, where Mr. Dickson first found it.

Roots annual, black, elongated, forming dense tufts. Stems nearly all simple; the fertile ones short, bearing several crowded, spreading leaves of a dark green, strongly reticulated, entire, broad-ovate, contracted at each end, and acute at the summit, furnished with a strong central rib; the other stems or branches are taller, clothed with more distant, alternate, paler and blunter leaves. Fruitstalks solitary, terminal, erect, from half an inch to an inch high, thickish, firm, of a reddish brown. Receptacle globular, brown, strongly corrugated when verging towards decay. Capsule about half as wide as the receptacle, and scarcely so long, brown, cylindrical.

SPLACHNUM rugosum.
Rugged Gland-moss.

CRYPTOGAMIA Musci.

Gen. Char. Caps. cylindrical, placed on a fleshy receptacle. Fringe simple, of 16 teeth, standing in pairs.

Spec. Char. Receptacle globose, at length wrinkled, brown. Leaves broad-ovate, acute, entire.

Syn. Splachnum rugosum. Dicks. Crypt. Fasc. 4. 3. t. 10. f. 7. Sm. Fl. Brit. 1173.

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Dec 1 1809, published by J. Sowerby, London.

SPLACHNUM lingulatum.

Tongue-leaved Gland-moss.

CRYPTOGAMIA Musci.

GEN. CHAR, *Caps.* cylindrical, placed on a fleshy *receptacle.* *Fringe* simple, of 16 teeth, standing in pairs.

SPEC. CHAR.- Receptacle inversely conical, brown, narrower than the capsule. Leaves tongue-shaped, obtuse, entire, pointless.

SYN. Splachnum lingulatum. *Dicks. Crypt. fasc.* 4. 4. *t.* 10. *f.* 6. *Sm. Fl. Brit.* 1177.

SENT from the Highland mountain of Ben Lawers by Mr. G. Don. We have also been favoured with a specimen by Mr. Dickson, its original finder and describer.

This species forms tufts, supposed to be annual like the rest of its genus. Roots black, dense. Stems simple or divided, not an inch high. Leaves of a fine pellucid green, with strong oblong reticulations, tongue-shaped, rather concave, obtuse, entire, single-ribbed, without any terminal hair or point; the lower ones rather more acute. Fruitstalks solitary, terminal, above an inch high, of a fine deep crimson when fresh, not quite straight. Receptacle so small and narrow as to seem merely the elongated base of the capsule, which is of the same brown or chesnut hue, oblong, with a widish mouth. Fringe short, inflexed, brown.

SPILANTHUS Linnæan.

Tongue-leaved Gland-moss.

2096.

Dec.1 1819 published by J.t Sowerby London.

LICHEN atro-cinereus.

Ashy-black Crustaceous Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust tessellated, greyish-black, smooth. Shields several together, depressed, brownish-black, with a paler border; at length crowded, elevated, the border being obliterated.

SYN. Lichen atro-cinereus. *Dicks. Crypt. fasc.* 3. 14. *t.* 9. *f.* 2. *With. v.* 4. 19. *Hull.* 289.
L. coracinus. *Ach. Prod.* 79?
Verrucaria coracina. *Hoffm. Germ. v.* 2. 183?
Parmelia coracina. *Ach. Meth.* 157?

FOUND on rocks by Mr. Dickson, one of whose own specimens, in Mr. Turner's collection, is drawn in our plate.

The crust is hard and dense, broken into various obtuse angular fragments, internally pale grey, but of an ash-coloured black on the surface, smooth and destitute of mealiness. Shields two, three, or more, in each fragment, depressed or somewhat immersed in the crust, small, roundish, at first flattish, of a rusty black, with a border of the same colour; afterwards, according to Mr. Dickson, elevated, crowded, black, losing their margins and becoming tubercles.

Acharius appears to have taken from Hoffmann the idea of the *Verrucaria coracina* being the same, not having seen either himself. However this may be, Mr. Dickson's is the original name.

LICHEN atro-cinereus.

Ashy-black Crustaceous Lichen.

GEN. CHAR. Male, scattered warts.

Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust irregular, greyish-black, smooth. Shields several together, depressed, brownish-black, with a paler border; at length crowded, elevated, the border being obliterated.

SYN. Lichen atro-cinereus. Dicks. Crypt. Fasc. 3. 14.
t. 9. f. 2. With. v. 4. 19. Hull. 289.
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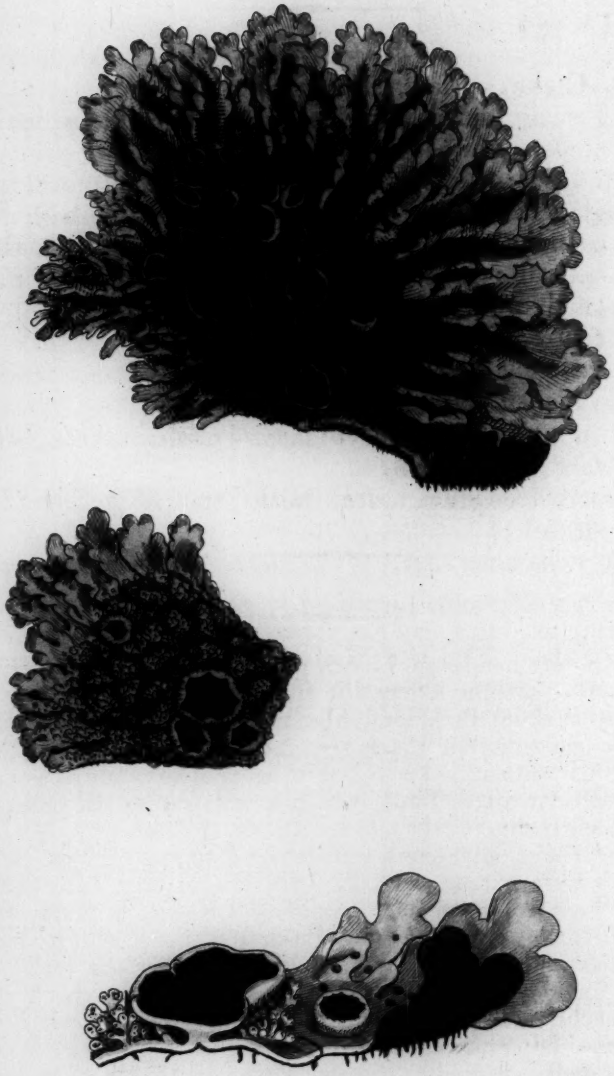


Dec 1809 published by J.t Sowerby London

LICHEN conspersus.

Greenish Chesnut-shielded Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Imbricated, radiated, membranous, pale glaucous green, besprinkled with blackish points; granulated in the centre; brown with black fibres beneath; its segments lobed and sinuated, with dilated, rounded extremities. Shields towards the centre, chesnut, with an inflexed border like the leaf.

SYN. Lichen conspersus. *Ach. Prod.* 118.
L. centrifugus. *Huds.* 530. *With. v.* 4. 32. *Hull.* 294. *Lightf.* 814.
Lichenoides imbricatum viridans, scutellis badiis. *Dill. Musc.* 180. *t.* 24. *f.* 75.
Parmelia conspersa. *Ach. Meth.* 205. *Winch Guide, v.* 2. 56.

THIS very handsome Lichen grows on stones and rocks in the north, making a very fine appearance in wet weather, as we saw it about Bield and Moffat in the south of Scotland, where we gathered these specimens in 1782. They have suffered no alteration since, but on being at any time moistened, resume their original hue, which is only rather less green and vivid when dry.

The above characters sufficiently describe the species. It ranges near our *sinuosus*, *t.* 2050, but belongs to a section with broader segments, containing *scorteus*, *t.* 2065, *caperatus*, *t.* 654, &c. The chesnut disk of the shields at length falls out, leaving its basis of the colour of the leaf. We have found a variety in Italy, whose under side is much paler, approaching, in that respect, the true Linnæan *centrifugus*; but the latter is essentially distinguishable by its narrow linear paler segments, almost white (with blackish fibres) beneath, and, as Professor Afzelius informs us, spreads into circles many feet in extent, whose centre decays and disappears to within a hand's-breadth of the edge. Our whole plant is never above 6 inches wide, and but slightly decays in the middle. Dillenius first confounded them.

LICHEN conspersus.
Greenish Chesnut-shielded Lichen.

CRYPTOGAMIA Algæ.

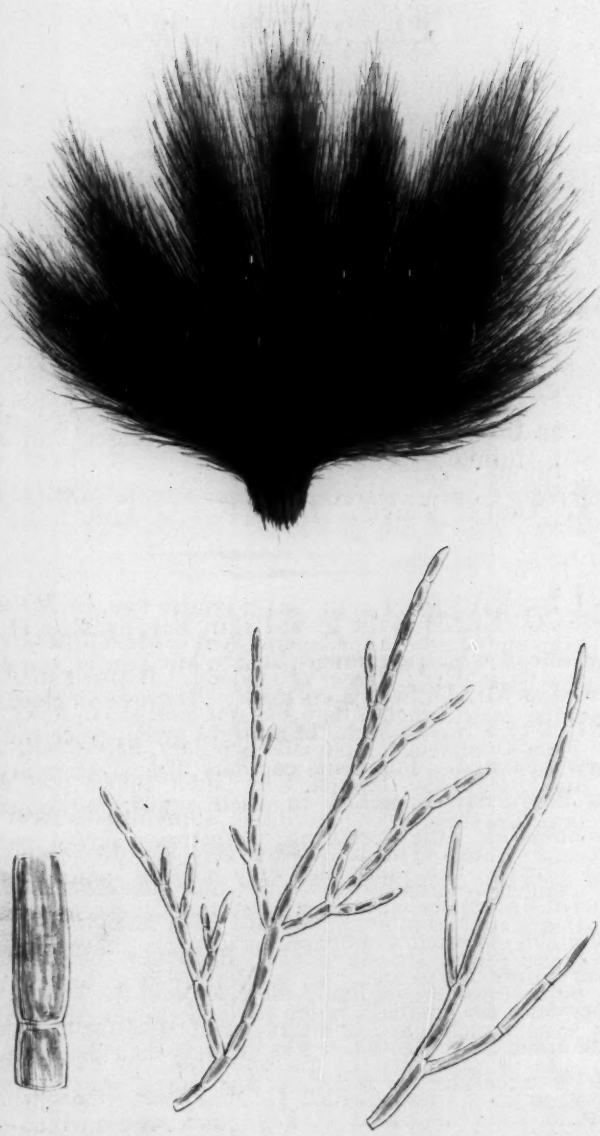
GEN. CHAR. Male, scattered warts.
Female, roundish shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Imbricated, radiated membranous, pale glaucous green, bespangled with blackish points; granulated in the centre; brown with black fibres beneath; its segments lobed and pinnated, with dilated, rounded extremities. Shields towards the centre, chesnut, with an inflexed border like the leaf.

SYN. Lichen conspersus. *Ach. Prod.* 119.
L. centrifugus. *Huds.* 590. *With.* v. 4. 32. *Fl. Br.* 294. *Ach. Syn.* 814.
Lichenoides imbricatum viridans, scutellis badiis. *Dill. Musc.* 180. t. 24. f. 75.
Parmelia conspersa. *Ach. Meth.* 203. *With. Arrang.* v. 2. 56.

THIS very handsome Lichen grows on stones and rocks in the north, making a very fine appearance in wet weather, as we saw it about Bield and Moffat in the south of Scotland, where we gathered these specimens in 1783. They have suffered no alteration since, but on being at any time moistened, resume their original hue, which is only rather less green and vivid when dry.

The above characters sufficiently describe the species. It ranges near our sinuosus, t. 2230, but belongs to a section with broader segments, containing centrifugus, t. 2095, caperatus, t. 634, &c. The chesnut disk of the shields at length falls out, leaving its basis of the colour of the leaf. We have found a variety in Italy, whose under side is much paler, approaching, in that respect, the true Lichenes centrifugus; but the latter is essentially distinguishable by its narrow linear paler segments, almost white (with blackish fibres) beneath, and, as Professor Acharius informs us, spreads into circles many feet in extent, whose centre decays and disappears to within a hand's-breadth of the edge. Our whole plant is never above 6 inches wide, and but slightly decays in the middle. Dillenius first confounded them.



Lee & Kanny published by J. Sowerby London.

CONFERVA arcta.

Close Green Conferva.

CRYPTOGAMIA Algæ.

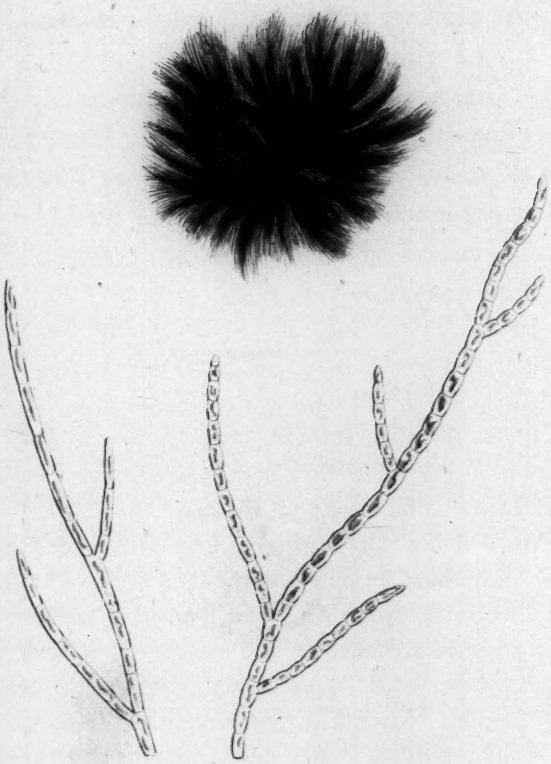
GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Bright green, repeatedly branched. Filaments straight and parallel; branches irregularly disposed, but little spreading. Lower joints as long as broad; upper many times longer; all slightly tumid.

SYN. Conferva arcta. *Dillw. Syn. n.* 108. *t.* E.

DISCOVERED in the sea at Bantry bay, by Miss Hutchins, from one of whose specimens, sent to Mr. Turner, our drawing, as well as Mr. Dillwyn's, is made. It grows in close straight tufts, 2 or 3 inches high, of a bright green, paler and blueish when separated. Filaments capillary, flaccid when dry, much and irregularly branched in their upper part chiefly, the branches but little spreading, sometimes almost parallel to each other. The joints are very slightly tumid, appearing clouded internally when dry; but their contents are not, in that state, so much condensed as in many other species. The lower joints are scarcely at all longer than broad, but the upper ones are gradually more so, and the length of the ultimate branches is 7 or 8 times as great as their diameter.

It is necessary to mention that our *C. isogona, t.* 1930, must in future be called *C. Youngana,* under which name it appears in Mr. Dillwyn's *t.* 102. We had no idea of the worthy author's intention, and we therefore rely on his pardon and that of his friend.



Jan.ʸ 1.1810 published by Jᵉ Sowerby London.

CONFERVA lanosa.

Woolly Green Conferva.

CRYPTOGAMIA Algæ.

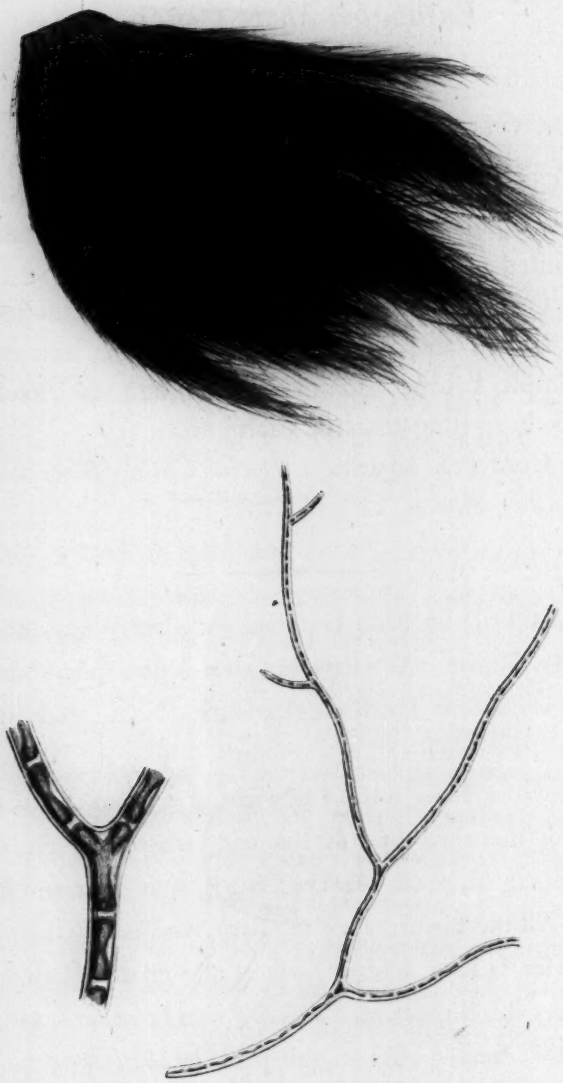
GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Yellowish green, repeatedly branched. Filaments somewhat beaded. Branches remote, alternate. Lower joints twice as long as broad; upper much longer; all slightly tumid.

SYN. Conferva lanosa. *Roth. Catal. fasc.* 3. 291. *t.* 9. *Dillw. Syn. n.* 109. *t.* E.

COMMUNICATED from Cromer by Mr. Turner. We have it also from the Rev. H. Davies. By what Mr. Dillwyn remarks, it appears to be not uncommon, growing on rocks, or on large marine plants, in the sea.

It forms dense tufts, springing from a flat disk (according to Roth), not above an inch high, of a yellowish green when fresh; when dry more white and opaque, so that it may be passed over as a faded or bad specimen, in which state we think we have seen it, of a small size, not unfrequently on other plants. The filaments are rather beaded, in texture feeling like cotton, much and alternately, rather distantly, branched. The joints are slightly tumid; the lower ones scarcely twice as long as broad; the upper much longer, though unequal in that respect. This difference seems to have escaped Dr. Roth, but Mr. Dillwyn assures us his specimens agreed with those of that learned botanist.



Just Trans. published by Jas. Lowerby London

CONFERVA riparia.

Entangled Shore Conferva.

CRYPTOGAMIA Algæ.

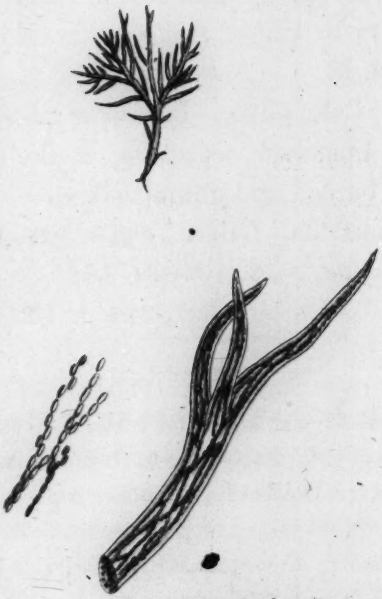
GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Green. Filaments much branched, divaricated and entangled towards their extremities; simple below. Joints twice as long as broad, the seeds settling towards each end.

SYN. Conferva riparia. *Roth. Catal. fasc.* 3. 216. *Dillw. Syn. n.* 111. *t.* E.

COLLECTED by Miss Hutchins in Bantry bay, and sent us by Mr. Turner. We have not seen it fresh, but our dried specimens confirm Dr. Roth's account of the seeds settling finally towards each end of the joints.

It composes dense tufts of a bright green, but the filaments are chiefly branched towards the end, where they are excessively entangled, their branches being numerous and divaricated. All the filaments are capillary, and even; their joints about twice as long as broad, not at all tumid. Roth's name is not very discriminative. Mr. Dillwyn however says he has found this same species in salt pools *by the side of* the Yare near Yarmouth, which renders it the more appropriate.



Jan.ry 1.st 1806 published by J.s Sowerby Lambeth

CONFERVA fœtida.

Fœtid Pale Conferva.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Pale olive. Filaments clustered longitudinally, branched, separating at the extremities; internally beaded and granulated.

SYN. Conferva fœtida. *Dillw. Conf. t.* 104. *Syn. n.* 114. *Villars Dauph. v.* 3. 1010. *t.* 56?

Ulva fœtida. *Vaucher Conf.* 285. *t.* 17. *f.* 3.

WE are obliged to our friend Mr. W. J. Hooker for fresh specimens of this plant, discovered by himself in April 1808, growing on decayed *Confervæ*, of other species, in the salt marshes at Cley, Norfolk. He also pointed out to us the synonym of Vaucher, to which Mr. Dillwyn, who met with the same on the coast of Glamorganshire, assents. We think it most probable that Villars's plant is the same, his figures, in the *cryptogamia* especially, being never very expressive.

Many flaccid slippery filaments, springing from one root, adhere laterally together, separating and branching off here and there in an irregular manner, and terminating acutely. When these aggregate stems or branches are examined microscopically, longitudinal rows of beaded filaments are discernible, which also run laterally into each other. The whole is of a light olive brown, or greenish, and very fœtid, like some half corrupted marine animals, or like the fresh-water sponge.

Jun 1 1810 published by J.t Sowerby London.

AIRA lævigata.

Smooth-sheathed Hair-grass.

TRIANDRIA Digynia.

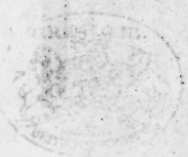
GEN. CHAR. *Cal.* of 2 valves, 2-flowered. *Cor.* of 2 valves. *Florets* without any imperfect one between them.

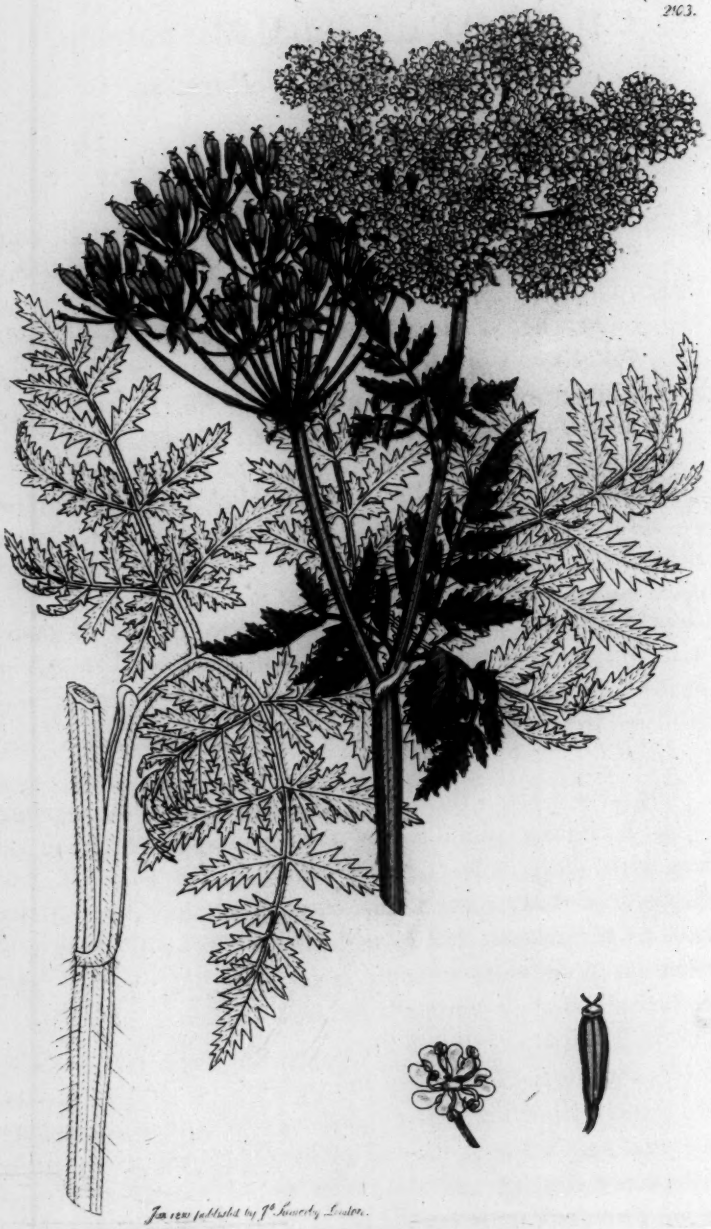
SPEC. CHAR. Leaves flat; with very smooth sheaths. Panicle close. Petals awned, hairy at the base. Partial stalk smooth and very short.

COMMUNICATED by Mr. George Don, who found it on the high mountains of Clova, in Angusshire, as well as at the sea-side near Dundee, and who first distinguished it from *A. cæspitosa*, *t.* 1453, of which Linnæus, who had the same from Lapland, thought it a viviparous variety. Mr. Borrer and Mr. Hooker have also noticed this grass on Ben Arthur by Loch Long, and other Highland mountains. According to Mr. Don's remark, it is not viviparous by the sea-side. It is perennial, flowering in May or June.

The differences observed by Mr. Don, between this plant and the *cæspitosa*, are, that it is never above half so tall, even when cultivated; and that the sheaths and backs of the leaves are remarkably smooth. The most essential difference however we find in the *rachis*, or partial stalk, which elevates one of the florets, and which is extremely short and quite smooth, though at the very base of the outer valve of the corolla there is a small tuft of hairs. In *A. cæspitosa* the whole *rachis* is hairy, and twice or thrice as long.

It is curious to observe, in the viviparous florets, the actual transformation of the glumes into leaves, evinced by the awn remaining at the top; or rather the base of the awn itself only, in the flower before us, is become leaf, while the glume seems little altered. The other glume, which had no awn, is quite changed to a leaf. The organs of impregnation are obliterated here, but in some cases they may possibly turn to leaves also.





Jan 1st 1820 published by Jno Sowerby London.

CHÆROPHYLLUM aureum.

Tawny-seeded Cow Parsley.

PENTANDRIA Digynia.

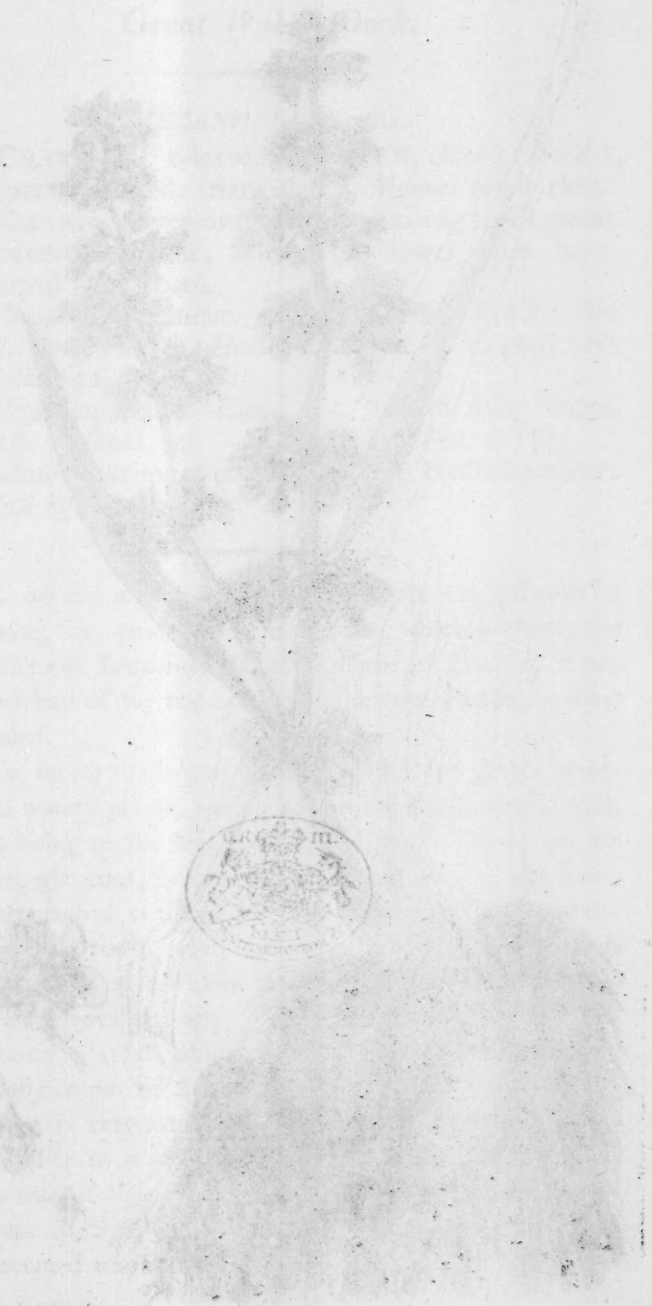
GEN. CHAR. *General invol.* none; *partial* reflexed, concave. *Petals* heart-shaped. *Fruit* oblong, smoothish.

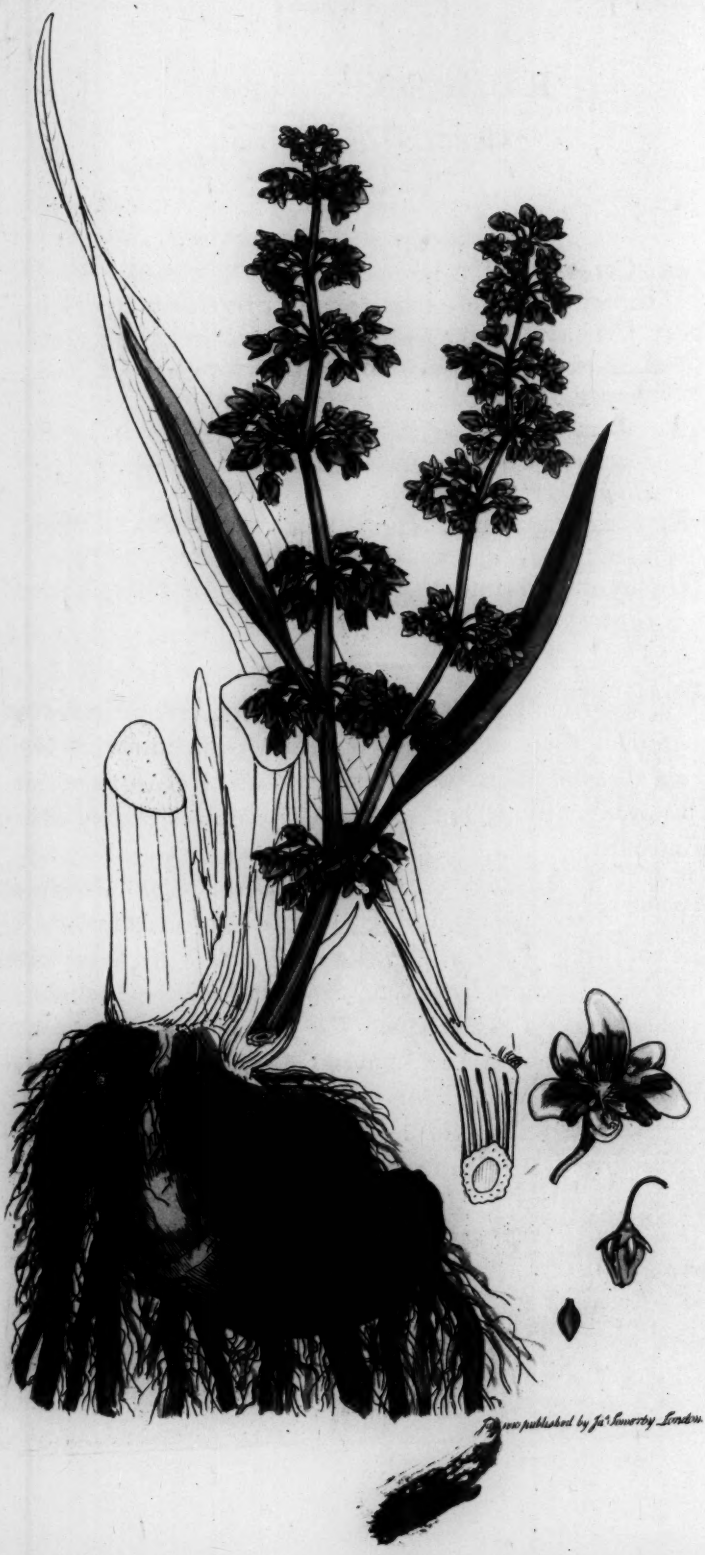
SPEC. CHAR. Stem somewhat swelling, angular, more or less hairy. Leaflets pinnatifid, acute, cut. Seeds coloured, ribbed.

SYN. Chærophyllum aureum. *Linn. Sp. Pl.* 370; but not *Mant.* 356. *Jacq. Austr. v.* 1. 40. *t.* 64.
Cerefolium n. 749. *Hall. Hist. v.* 1. 328.
Myrrhis perennis alba minor, foliis hirsutis, semine aureo. *Rupp. Jen. ed. Hall.* 282. *t.* 5.

THIS is one of those rare plants discovered by Mr. G. Don, with which few botanists are at all acquainted. He found it in the borders of fields, between Arbraath and Montrose, and at Corstorphine near Edinburgh. It is perennial, flowering in June.

The stem is about three feet high, branched, solid, angular, striated, slightly tumid below each joint, clothed more or less with short, soft, deflexed hairs, among which a few coarse bristles are occasionally interspersed, like those of the exotic *Ch. hirsutum*, but more deflexed. In Switzerland it is often nearly or quite smooth, as described by Jacquin. The common leaf-stalk surrounds the stem by a ring at its base, but its edges upwards are linear and but little dilated. The leaves and leaflets have sharp and rather elongated points, and are acutely pinnatifid, and roughish. Umbels flattish, cream-coloured, often having the rudiments of a general involucrum. The seeds when young are rather tumid upwards; as they ripen they grow more lanceolate, of a tawny or yellowish hue, marked with three broad smooth ribs at each side, and crowned with the divaricated styles.





Pubd. as published by Jas. Sowerby, London.

RUMEX aquaticus.

Great Water Dock.

HEXANDRIA Trigynia.

GEN. CHAR. *Cal.* 3-leaved. *Petals* 3, closed. *Seed* 1, superior, naked, triangular. *Stigmas* many-cleft.

SPEC. CHAR. Valves ovate, entire, bearing small grains. Leaves lanceolate, acute; the lower ones heart-shaped at the base.

SYN. Rumex aquaticus. *Linn. Sp. Pl.* 479. *Sm. Fl. Brit.* 394. *Hull. ed.* 2. 102. *Lightf.* 190. *Relh.* 144.

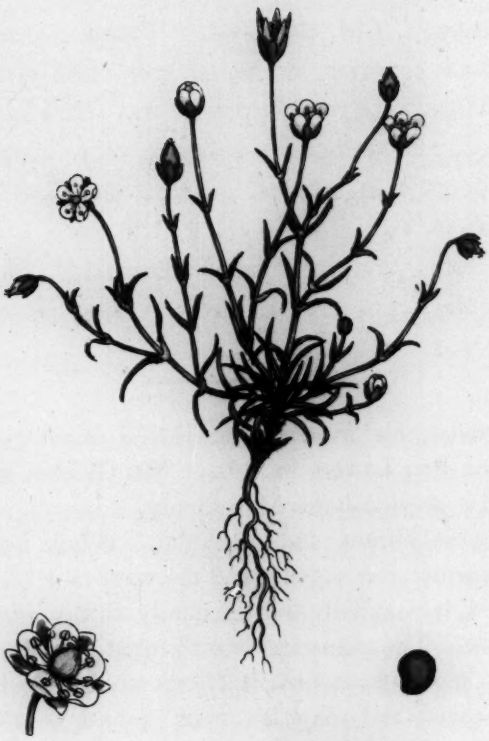
R. Hydrolapathum. *Huds.* 154. *With.* 355. *Sibth.* 118. *Abbot.* 82. *Woodv. Med. Bot. t.* 178.

Lapathum maximum aquaticum, sive Hydrolapathum. *Raii Syn.* 140.

WE know not why there should have been any difficulty in determining the synonyms of this plant, which is clearly the *R. aquaticus* of Linnæus. The *paludosus* of Hudson seems to be a variety of it; but no one has ascertained exactly what he intended.

This is by far the largest of our Docks, and grows abundantly in watery places, having a large knobby perennial root, the stem rising to the height of 4 or 5 feet. The leaves are somewhat glaucous, lanceolate, acute and entire; the lower ones heart-shaped at the base. The flowers come forth copiously in July and August, and the large brown shining seeds remain long, in rather close drooping whorls. The permanent petals are ovate, veiny, entire, rarely somewhat toothed, each bearing a small oblong reddish grain, varying in size occasionally in one of them.

The root is very astringent, and the late Sir John Hill recommended it as a medicine of great efficacy in the scurvy. Linnæus was of the same opinion, and brought it into extensive use in Sweden. Perhaps it is too common to be much esteemed amongst us.



Jan. 1st 1820 published by J.t Sowerby London.

SPERGULA saginoides.

Smooth Awl-shaped Spurrey.

DECANDRIA Pentagynia.

GEN. CHAR. *Cal.* 5-leaved. *Petals* 5, undivided. *Capsule* superior, ovate, of 1 cell and 5 valves.

SPEC. CHAR. Leaves opposite, awl-shaped, pointless, naked. Flower-stalks solitary, very long, smooth.

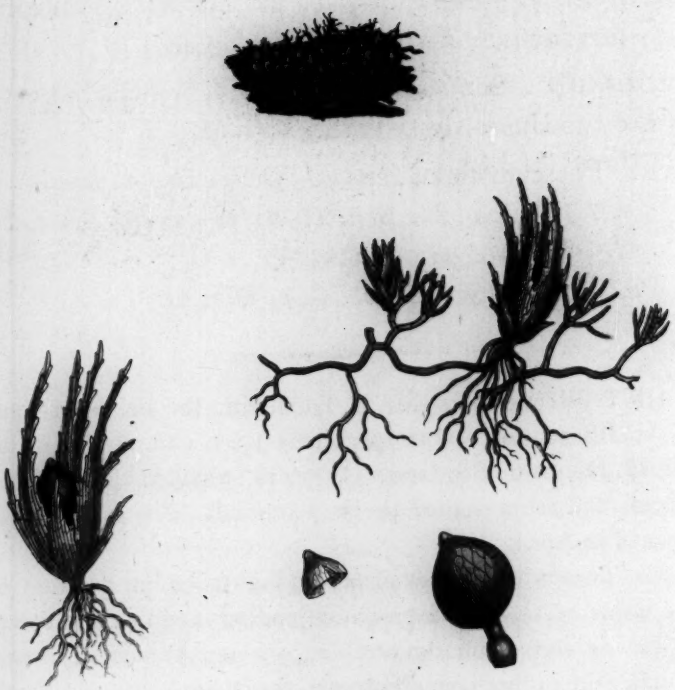
SYN. Spergula saginoides. *Linn. Sp. Pl.* 631. *Sm. Fl. Brit.* 504. *Hull. ed.* 2. 136.

Alsine foliis gramineis sæpè fasciculatis, glabris, pedunculis longis nudis unifloris. *Gmel. Sib. v.* 4. 157. *Herb. Linn.*

WE received this from the late Mr. J. Mackay, who gathered it on Ben Lawers in 1794. Mr. G. Don appears to have found it previously on Mal-ghyrdy.

The root is fibrous and perennial. Whole plant quite smooth, in which last respect, and the want of a bristly point to the leaves, it essentially and constantly differs from *S. subulata, t.* 1082. The stems are decumbent at their lower part, then erect, mostly branched, leafy, round, with rather tumid joints. Leaves awl-shaped, acute, joined at their base. Flower-stalks terminal, solitary, erect, round, naked, very smooth, often as long as the stems, each bearing a rather drooping white flower, somewhat larger than those of *S. subulata*. Calyx-leaves ovate, obtuse, even, with hardly any ribs, gibbous at their base. Petals roundish, scarcely so long as the calyx. Stamens 10, about as long as the petals. Capsule ovate, of 5 valves, twice as long as the calyx. Seeds roundish kidney-shaped, brown, smooth, not bordered.

Professor Swartz describes but 5 stamens in his *S. saginoides*. Whether ours be the same or not, we are certain it is that of Linnæus.



Jan.1.1810 published by J.s Sowerby London

PHASCUM stoloniferum.

Branching-rooted Earth-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Capsule* ovate, without any separate lid, deciduous. *Veil* minute, deciduous.

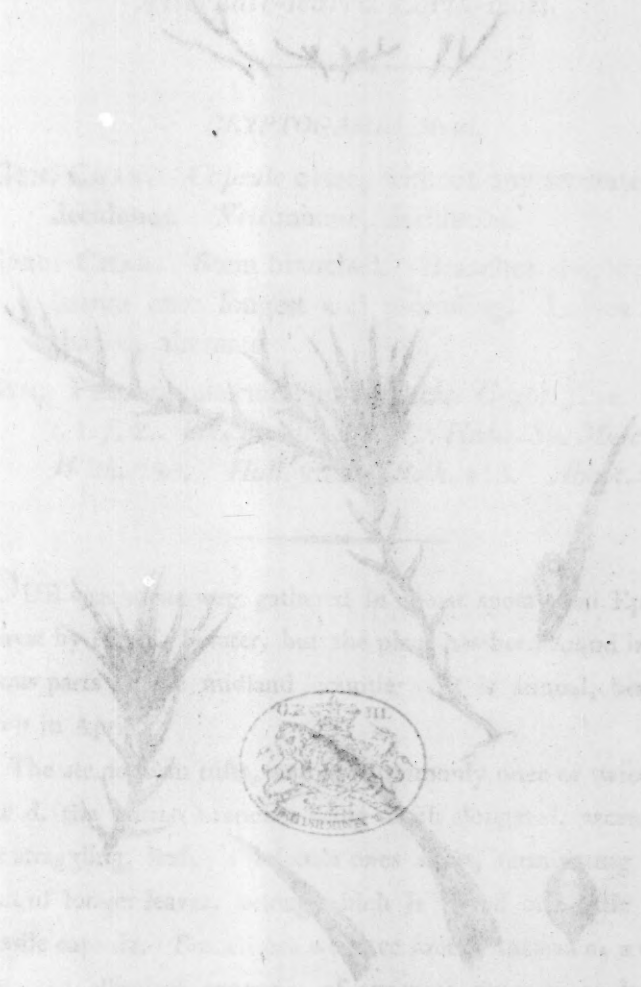
SPEC. CHAR. Shoots creeping, jointed, branched. Leaves ovato-lanceolate, pointed, toothed.

SYN. Phascum stoloniferum. *Dicks. Crypt. fasc. 3. 1. t. 7. f. 2. Sm. Fl. Brit. 1157. Hedw. Sp. Musc. 24. With. 786. Hull. 252.*

Ph. serratum β. *Turn. Musc. Hib. 4.*

FIRST discovered by Mr. E. Forster in the neighbourhood of Walthamstow. Our specimens were communicated by Mr. G. Don from Scotland. It grows on naked clay in damp places, and is presumed to be perennial. The capsules are ripened in April.

Mr. Turner has always suspected this to be but a variety of the *serratum*, *t.* 460, from which indeed it principally differs in having very distinctly creeping, strong, branched shoots, which, like proper creeping roots, throw up, here and there, tufts of erect, ovato-lanceolate, taper-pointed, strongly toothed leaves, in whose centre stands an ovate, or nearly globular, brown, almost sessile capsule. How far the singular, compound, Conferva-like shoots of *Ph. serratum*, otherwise seemingly of no use, may be capable of becoming hardened perennial roots, we are not furnished with sufficient observations to decide, but we are much inclined to assent to that opinion.



Jun. 1 1820 Published by J. Sowerby

PHASCUM alternifolium.

Alternate-leaved Earth-moss.

CRYPTOGAMIA Musci.

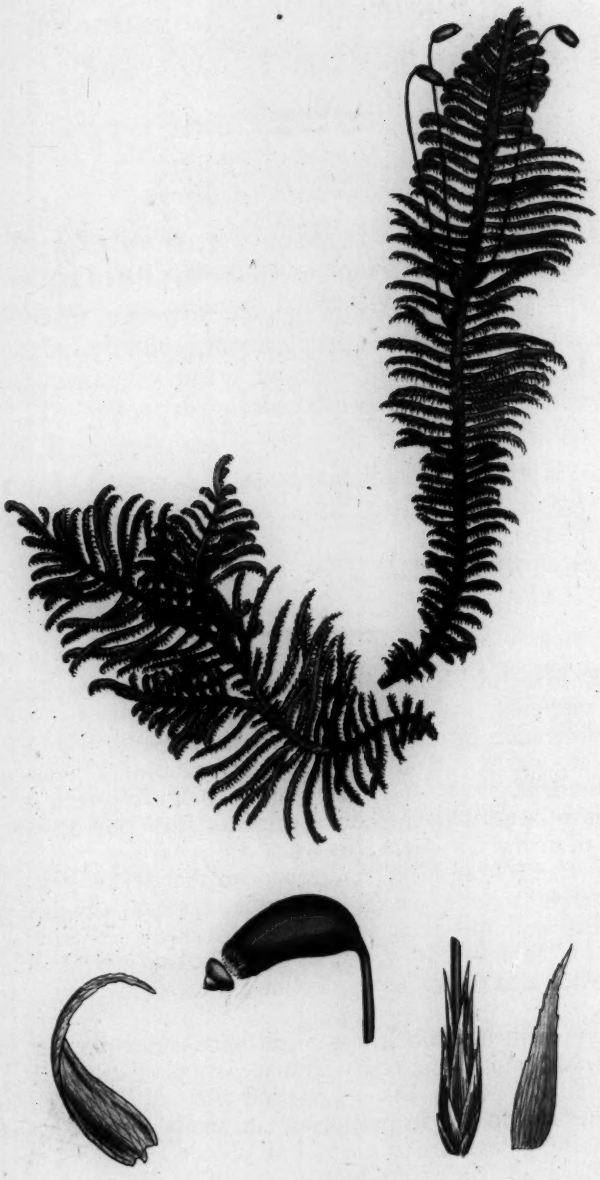
GEN. CHAR. *Capsule* ovate, without any separate lid, deciduous. *Veil* minute, deciduous.

SPEC. CHAR. Stem branched. Branches simple; the barren ones longest and ascending. Leaves awl-shaped, alternate.

SYN. Phascum alternifolium. *Dicks. Crypt. fasc.* 1. 2. *t.* 1. *f.* 2. *Sm. Fl. Brit.* 1157. *Hedw. Sp. Musc.* 24. *With.* 786. *Hull.* 252. *Relh.* 413. *Abbot.* 229.

OUR specimens were gathered in moist spots upon Epping forest by Mr. E. Forster, but the plant has been found in various parts of the midland counties. It is annual, bearing fruit in April.

The stems form tufts, and are commonly once or twice divided, the barren branches being much elongated, ascending or straggling, leafy; the fertile ones short, terminating in a tuft of longer leaves, among which is found one little oval sessile capsule. Sometimes we have found, instead of a capsule, an elliptical congeries of apparent *gemmæ*, or bulbs, for it is not easy to say which. The leaves are all alternate, awl-shaped, acute, single-ribbed and entire.



Jan. 1 1810 published by J.t Sowerby London.

HYPNUM Crista-castrensis.

Ostrich-plume Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem procumbent, closely pectinated. Leaves lanceolate, curved, nearly entire, plaited, without ribs. Capsule oblong, drooping. Lid conical, short.

SYN. Hypnum Crista-castrensis. *Linn. Sp. Pl.* 1591. *Hedw. Sp. Musc.* 287. *t.* 76. *f.* 1—4. *Ehrh. Crypt.* 6.
H. n. 1768. *Hall. Hist. v.* 3. 34.

THE first British specimens we ever saw of this fine moss were gathered by Mr. G. Don, several years ago, but since the publication of *Fl. Brit.*, in woods in Scotland. That in our plate was sent from a wood at the head of Hawes-water, Cumberland, by the Rev. Mr. Dalton to Mr. Turner, in 1809. We have been obliged to draw the fruit from one of Mr. Davall's beautiful Swiss specimens.

We find by the Linnæan herbarium that Hedwig was right in the above name; see *H. molluscum, t.* 1327, which English botanists had mistaken for *Crista-castrensis*. We have supposed Dillenius's *t.* 36. *f.* 20, B, might be the latter, but it may not be so, and therefore we decline a positive reference to that figure.

The present is a much larger and handsomer plant than the *molluscum*, more accurately and closely pectinated, and elegantly curved, truly like an ostrich plume. The leaves are narrower and longer in proportion, scarcely serrated except at their points, destitute of a rib, but plaited, and very strongly curved. Fruit-stalks an inch and half high, or more, red. Capsule elongated and almost cylindrical, drooping and curved. Lid considerably shorter than in *molluscum*, quite straight, without any elongated point.

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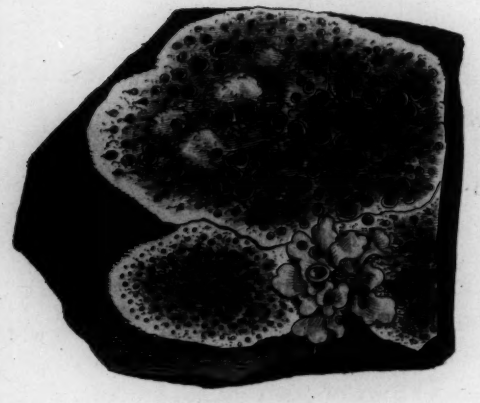

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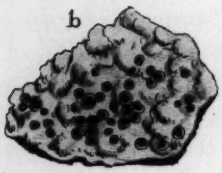

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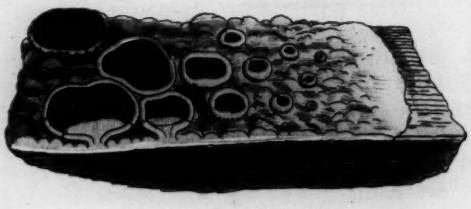

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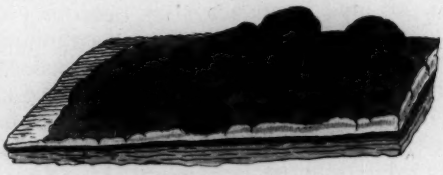


Jan. 1.1810 published by J.t Sowerby London

LICHEN subfuscus.

Brown-shielded Crustaceous Lichen.

CRYPTOGAMIA Algæ.

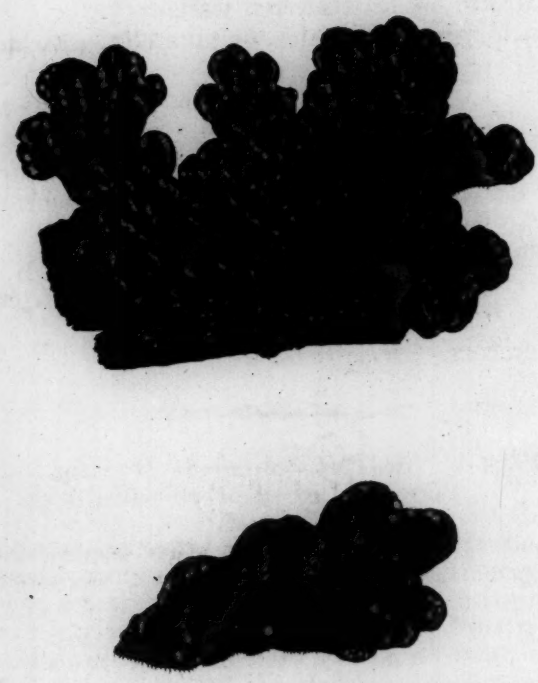
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust thin, continued, smoothish, brownish-white. Shields sessile, slightly convex, reddish-brown, with a tumid, whitish, entire border.

SYN. Lichen subfuscus. *Linn. Sp. Pl.* 1609. *Ach. Prod.* 47. *Huds.* 529. *With. v.* 4. 21. *Hull.* 290. *Relh.* 451. *Sibth.* 323. *Abbot.* 262.
Lichenoides crustaceum et leprosum, scutellis subfuscis. *Dill. in Raii Syn.* 71. *Musc.* 134. *t.* 18. *f.* 16.
Parmelia subfusca. *Ach. Meth.* 167.

VERY common on the smooth barks of trees. The crust forms roundish patches, of various sizes, and is uninterrupted, usually very thin, though calcareous, minutely granulated, but not leprous nor powdery, of a slightly brownish or greyish white. On dead wood it sometimes by age becomes tumid and broken, and on walls now and then of a considerable chalky substance, but is never so thick nor so white as the crust of *ater*, *t.* 949. This wall variety was given us by Mr. Turner, see fig. b, but is not that meant by Dillenius, which is *epipolius*. See *Tr. of L. Soc. v.* 7. 111.

The shields are abundant, often crowded, their disk rather convex, usually of a bay or chesnut colour, but varying in brightness, often parti-coloured, or mixed with a pale waxy hue, as if the impregnation of the seeds had failed there, and the disk had withered or dropped out. The border is of the substance and colour of the crust, or rather whiter, entire, or slightly crenate, especially when old. In a variety sent by Mr. Lyell, from beeches in the New Forest, the crust is greenish, the disks of the shields darkish brown, very tumid, and in a manner proliferous or compound, see fig. c.



Jan.ry 1810 published by J.t Sowerby London.

LICHEN crocatus.

Yellow-veined Lichen.

CRYPTOGAMIA Algæ.

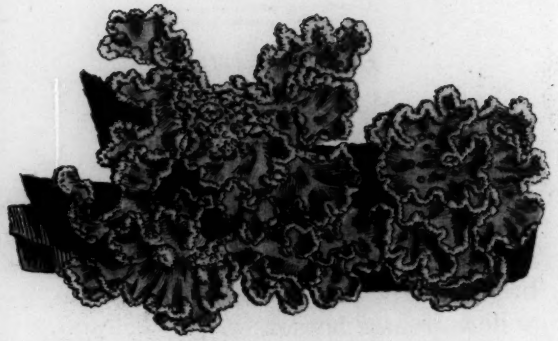
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Somewhat coriaceous and depressed, sinuated, roundly lobed, cellular, glaucous brown; the margin and veins bearing lemon-coloured powder; the dorsal pits lemon-coloured. Shields brownish-black, with a border like the leaf.

SYN. Lichen crocatus. *Linn. Mant.* 310. *Ach. Prod.* 158. *Dicks. Crypt. fasc.* 2. 22. *H. Sicc. fasc.* 4. 24. *With. v.* 4. 52. *Hull.* 296.
Sticta crocata. *Ach. Meth.* 277.

FOUND first by Mr. Dickson on the Highland rocks of Scotland. Mr. Borrer and Mr. Hooker gathered the specimen in our plate on trees at Inverary.

The fronds spread in a loosely imbricated manner, forming roundish patches, and are rather leathery, sinuated, with rounded notched lobes. The upper surface is of a dull glaucous or greenish brown, full of numerous little smooth hollows, separated from each other by a rude network of elevated veins, which are rough and scurfy, producing a fine lemon-coloured powder. The under side is of a reddish brown, downy, with little smooth lemon-coloured pits interspersed. We have never been so fortunate as to see shields, either in the Linnæan or any other specimens; but they are described as of a brownish black, with a margin like the substance of the frond. No doubt, they are much like those of *L. fuliginosus*, *t.* 1103.——With this was originally confounded the *Sticta aurata*, *Ach. Meth.* 277, which, on our representation, the learned author has distinguished from it, and which is figured by Dillenius and Hoffman. Finding this last in Mr. Hudson's British herbarium, we have suspected he might have gathered it in Devonshire; which merits further inquiry.



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1

Fyfe, new published by J. Sowerby London.

LICHEN pinastri.

Golden Pine Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

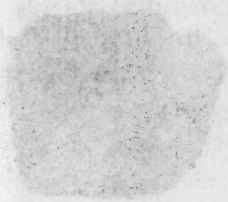
SPEC. CHAR. Membranous, depressed, smooth, and of a pale glaucous brown, on both sides; the margin elevated, curled, roundly lobed, bearing copious bright-yellow powder. Shields bright bay, with a yellow crenate border.

SYN. Lichen pinastri. *Scop. Carn. v.* 2. 382. *Ach. Prod.* 168. *Dicks. Crypt. fasc.* 3. 18. *With. v.* 4. 51. *Hull.* 296.
Squamaria pinastri. *Hoffm. Pl. Lich. t.* 7. *f.* 1.
Cetraria juniperina β. *Ach. Meth.* 298.

MR. DICKSON first noticed this species on the trunks of Scotch firs in the Highlands. Mr. Turner very unexpectedly detected a few small plants of the same on Mr. Rigby's pales at Framingham near Norwich, the most elevated spot in Norfolk, one of which is drawn at *fig.* 1.

This is truly a beautiful as well as very rare Lichen. The fronds spread loosely in irregular tufts, and are of a soft membranous texture when moist, smooth on both sides, and of a pale glaucous brown, with a strong tinge of yellow; but the latter hue is overpowered by the bright lemon-colour of the copious powder, borne by the numerous rounded and curled marginal lobes, which grow upright, though the leaf itself is depressed. When Dr. Acharius published his *Prodromus* he had never seen the shields. We have drawn them, *fig.* 2, from a specimen in the Linnæan herbarium, they being no where figured. The disk is bright chesnut; the border thin, somewhat notched, yellow.

Our learned friend has, in his *Methodus*, reduced this to a variety of *L. juniperinus*, which last has never been found in Britain. We have gathered both, with no small pleasure and attention, in Savoy, and can hardly be persuaded to unite them. Hoffmann's *t.* 7 is sufficiently expressive of their differences, though we own *juniperinus* often produces yellow powder.



2112.

Feb.1 1810 published by J.t Sowerby London.

LICHEN rubiformis.

Raspberry-fruited Lichen.

CRYPTOGAMIA Algæ.

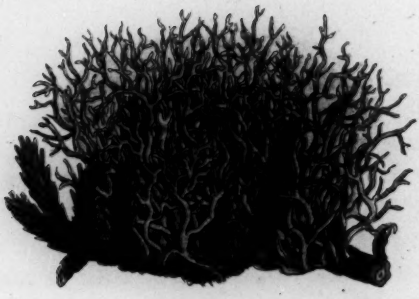
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

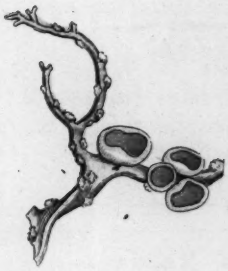
SPEC. CHAR. Fronds depressed, somewhat crustaceous, rounded, lobed, crenate, light green; thickened and pale at the margin; white beneath. Tubercles on the disk, clustered, sessile, minute, globose, hollow, red.

SYN. Bæomyces rubiformis. *Ach. Meth.* 324. *t.* 7. *f.* 5.

WELL might even the experienced Dr. Acharius hesitate how to dispose of this singular production, which his friend Wahlenberg brought him from the north of Norway, and of which I received a solitary specimen long ago from my lamented correspondent Mr. W. Brunton, who found it near Rippon, Yorkshire. We can hardly render a more acceptable service to the curious cryptogamist, than to give an accurate figure and dissection of it, which Mr. J. D. Sowerby has carefully made, under my inspection, and which seems more perfect than what Acharius has drawn. Of the identity of the two plants we presume no doubt can arise.

The fronds grow on turfy earth, and exactly resemble those of the generality of *Bæomyces*, or Cup Lichens. They make a patch about an inch wide. Each is rounded, bluntly lobed, thick-edged, and crenate, of a pale rather glaucous green above; white beneath. The fructification, as we presume it to be, consists of numerous little globose or ovate bodies, of a fine red, generally clustered, sometimes dispersed, certainly originating from the disk of the leaf. They are hollow and seem spongy or powdery within, with an open thick-edged mouth at the summit. They are surely not parasitical *fungi*, but can they be of the nature of galls? If the latter, it is remarkable that no sign of the proper cup-shaped fructification of a *Bæomyces* should be present, as the fronds of this tribe seldom occur without some.





Feb.1 1811 published by J.t Sowerby London.

LICHEN flavicans.

Brass-wire Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

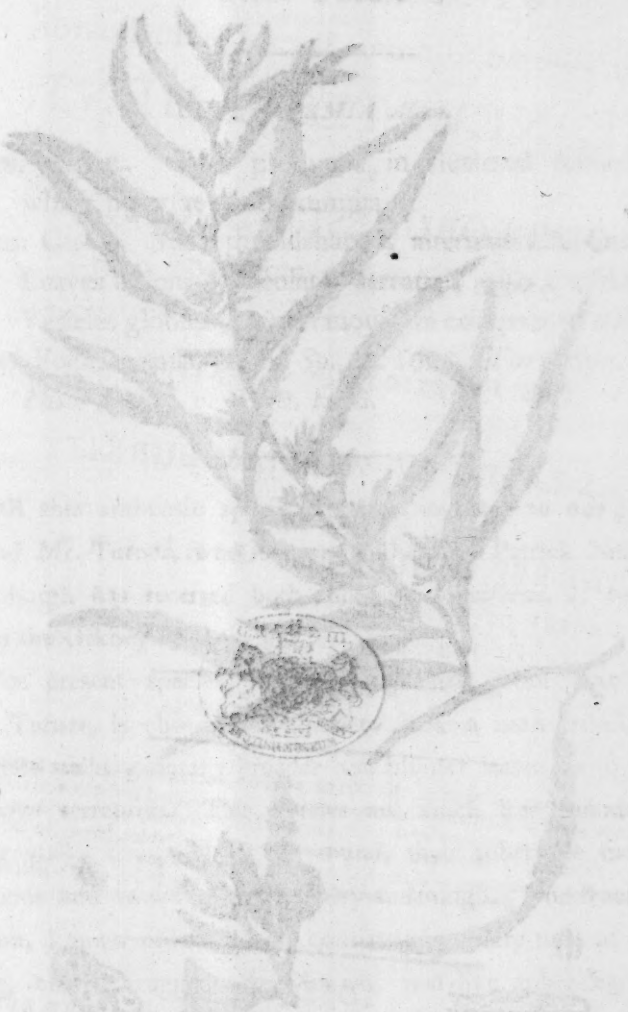
SPEC. CHAR. Leafy, branched, tufted and entangled, tawny, warty, linear, compressed, angular, wavy; branches divaricated, taper-pointed. Shields lateral, nearly sessile, flat, orange, with a narrow, entire, pale border.

SYN. Lichen flavicans. *Swartz. Prod.* 147. *Ach. Prod.* 182.
L. vulpinus. *Huds.* 559. *With. v.* 4. 49. *Hull.* 307.
Usnea capillacea citrina, fructiculi specie. *Dill. Musc.* 73. *t.* 13. *f.* 16.
Muscus aureus tenuissimus. *Dill. in Raii Syn.* 65.
Parmelia flavicans. *Ach. Meth.* 268.

COMMUNICATED by Mr. W. Borrer from Sussex. It grows on trees and shrubs, more commonly in Devonshire than any other county. For the shields we are obliged to Dr. Acharius. We have received this species also from South America and the West Indies.

The fronds compose dense entangled tufts, an inch or two high, of a rich tawny or orange hue, paler and even grey where least exposed to light. They are slender, linear, very much branched, compressed and angular, smooth, except where numerous powdery warts break out; their ultimate ramifications are numerous, very fine, and acute. Shields, never yet found in England, lateral, nearly or quite sessile, small, with a flat orange disk, and a pale entire inflexed border, of the substance of the frond. Of all the British species this is most allied to *chrysophthalmus*, *t.* 1088, and *atlanticus*, *t.* 1715, however different from the latter in colour.

Linnæus, having misquoted Dillenius, has led our British botanists to take this for *L. vulpinus*, a beautiful lemon-coloured alpine kind, with brown shields, which has never yet been found in Britain.



Published by J. Sowerby London.

FUCUS natans.

Float Fucus.

CRYPTOGAMIA Algæ.

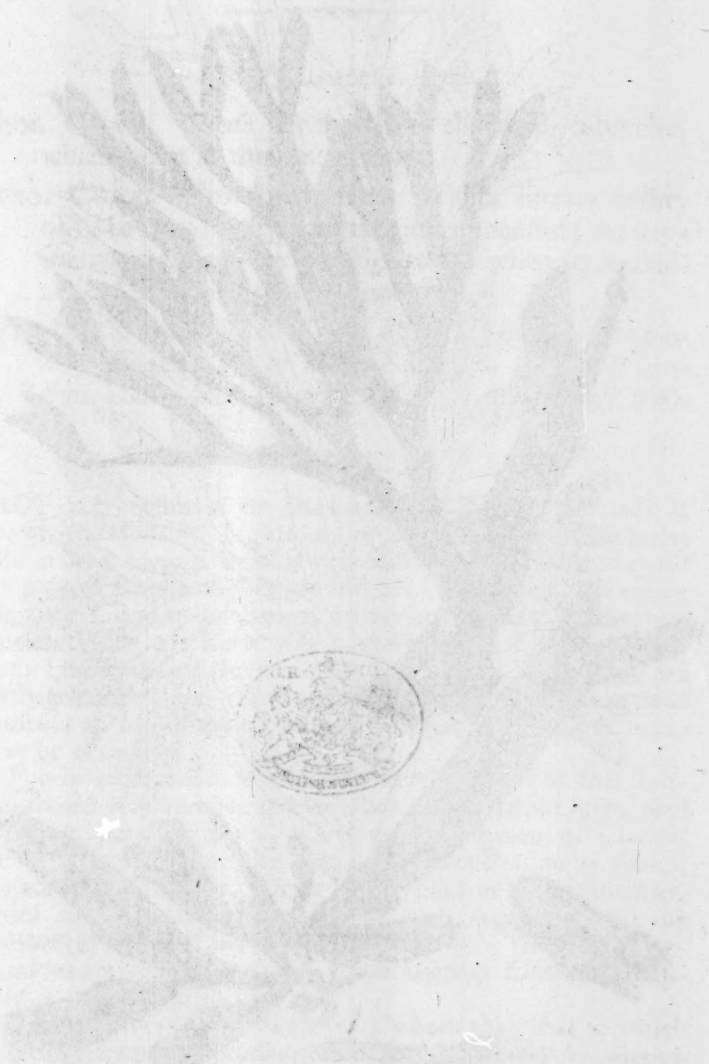
GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

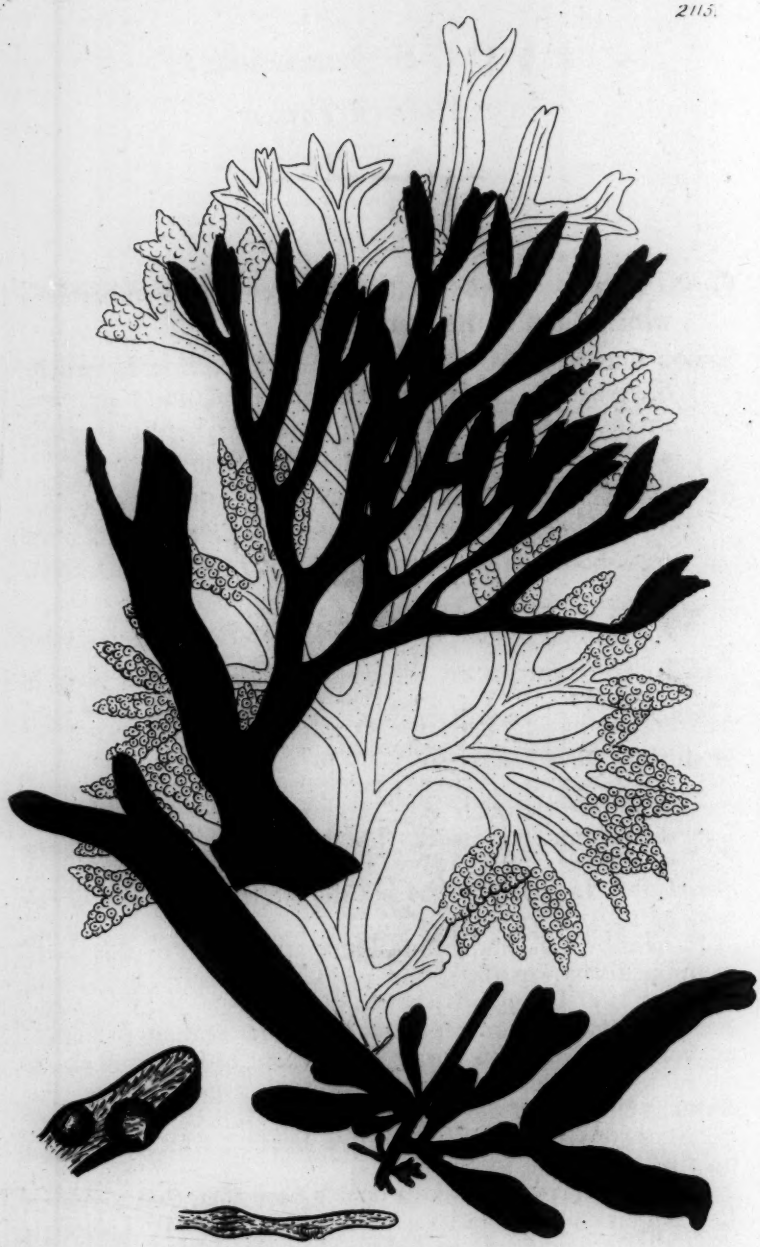
SPEC. CHAR. Stalk threadshaped, alternately bipinnate. Leaves oblong-lanceolate, serrated, with a mid-rib. Vesicles globose, membranous, on compressed stalks.

SYN. Fucus natans. *Linn. Sp. Pl.* 1628. *Turn. Syn.* 48. *Hist. Fucor. v.* 1. 99. *t.* 46.

FOR this authentic specimen we are indebted to our good friend Mr. Turner, who informs us that Mr. Patrick Neil of Edinburgh has received both this and *bacciferus*, *t.* 1967, from the Orkney isles.

The present species, first distinguished from that by Mr. Turner, is observed by him to have a more regularly pinnate stalk, generally broader and blunter leaves, with less spinous serratures. The vesicles are much less abundant, their stalks compressed, not round, their substance membranous and smooth, not leathery and rough. The fructification, known only in this, consists of axillary tufts of oblong, cloven, rugged, dark-brown, pod-like tubercles, in each of which several dark seeds are found, deeply imbedded in mucus. At the sides of the leaves are often produced little fibrous tufts, as in other *Fuci*, concerning which no certain opinion has yet been formed.





Feb.1 1810. published by J.A. Lowerby London

FUCUS ceranoides.

Buck's-horn Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

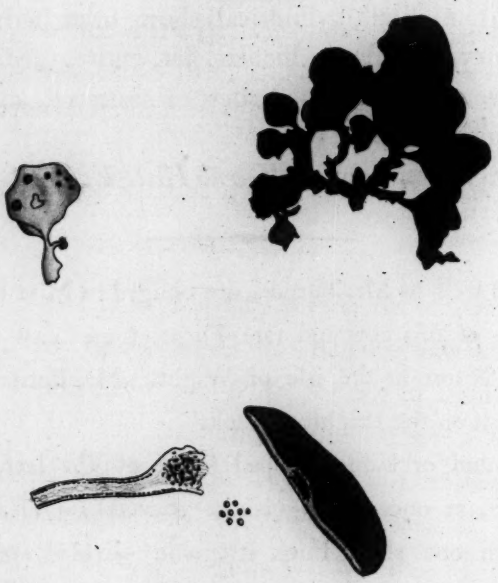
SPEC. CHAR. Frond somewhat forked, linear, entire, olive-brown, with a central rib, pinnatifid; its segments radiated: extremities tumid when in fructification, linear-lanceolate, pointed.

SYN. Fucus ceranoides. *Linn. Sp. Pl.* 1626. *Gooden. and Woodw. Tr. of Linn. Soc. v.* 3. 149. *Turn. Syn.* 136. *Hist. Fucor. v.* 2. 51. *t.* 89. *Hull.* 320.

NOT very common on the coasts of Britain, nor was it known to Hudson, Lightfoot, or any other British botanist (the *crispus* having been always mistaken for *ceranoides*) till the present Bishop of Carlisle and Mr. Woodward, on seeing the true Linnæan specimen, recognised it as a Hampshire species. Our specimen was communicated by Mr. Turner from Shoreham in Sussex. To this learned botanist we are further obliged for showing the *linearis* of Hudson and *distichus* of Lightfoot to be not the present plant, but a variety of *vesiculosus*.

F. ceranoides is unquestionably nearly related to this last-mentioned very variable species; but its pinnatifid form, and radiating lateral segments, which make a segment of a circle, and at whose extremities alone the fructification is found, are considered by Mr. Turner as sufficient to keep it distinct, added to the usual narrowness of such segments, and the constant absence of air-vessels throughout. The barren extremities are very obtuse, but those bearing fruit are sharp-pointed, and often forked.

This species is more like a buck's horn than that to which Ray and his contemporaries gave the epithet *ceranoides*, though their plant, being erroneously quoted by Linnæus, caused him to adopt the name. We therefore see no inconvenience in preferring his nomenclature, in itself, to theirs.



Feb.1810 published by J.ª Sowerby London.

FUCUS reniformis.

Kidney-shaped Fucus.

CRYPTOGAMIA Algæ.

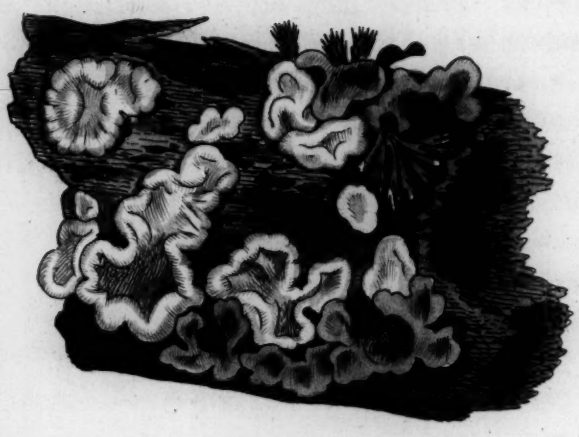
GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

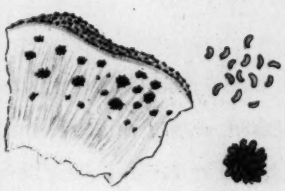
SPEC. CHAR. Stalk cylindrical, short, branched. Fronds kidney-shaped or orbicular, flat, entire, cartilaginous, nerveless, crimson. Tubercles scattered, superficial, hemispherical.

SYN. Fucus reniformis. *Turn. Hist. Fucor. v.* 2. 109. *t.* 113.

WE, as well as Mr. Turner, are obliged to Miss Everet for specimens of this new and rare *Fucus*, found cast upon the beach at Niton in the isle of Wight. Mr. Borrer found a single plant on the Brighton beach.

The round or kidney-shaped figure of the leaf, and its small size, at once distinguish it. Several such leaves grow usually on one short thick irregularly-divided stalk, from whose summit each leaf suddenly expands, without rib or veins. The substance is firm and rigid; the colour crimson, rendered more or less dull by age or accident. Fructification rather rare, in small convex tubercles, bursting from the surface in a dispersed manner. Mr. Turner observes that the old fronds are sometimes proliferous from their edges; that the plant has a faint smell of violets when moistened, and in drying does not adhere to paper.——It is best fastened with nearly cool glue.





Feb 1820 published by J.t Sowerby London.

TREMELLA albida.

Whitish Tremella.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Fructification* scarcely perceptible in a membranous jelly-like substance.

SPEC. CHAR. Sessile, dilated, obtuse, whitish or somewhat brownish, pulpy, semipellucid.

SYN. Tremella albida. *Huds.* 565. *With. v.* 4. 77. *Hull.* 309. *Relh.* 477. *Sibth.* 392. *Abbot.* 270.
T. candida. *Pers. Syn. Fung.* 624?
T. cerebrina. *Bull. Fung. v.* 1. 221. *t.* 386.
Elvela vicesima. *Schæff. Fung. v.* 2. *t.* 168.

FOUND on decayed branches of trees in shady woods, or according to Relhan on old rails. Mr. Lyell has sent it on a rotten branch of oak.

It bursts through cracks in the bark, and then spreads itself in horizontal or clustered, rounded, obtuse, scalloped masses, white, semipellucid, extremely gelatinous and tender when young; afterwards turning yellowish. Bulliard observes that in the white state it is often so like the brain of an animal as to be capable of deceiving the eye, and if laid on a plate of glass, covers it with powdery seeds. This circumstance, and its being found on old dead wood, proves the vegetable nature of this production, and that it is not an exudation of mucilage from the wood in consequence of immoderate wet.—— Bulliard says some varieties are always yellow, others brown or almost black.

Published by J. Sowerby London.

MENTHA gentilis.
Bushy Red Mint.

DIDYNAMIA Gymnospermia.

GEN. CHAR. *Cal.* 5-cleft. *Cor.* nearly regular, 4-cleft; its broadest segment notched. *Stamina* erect, distant.

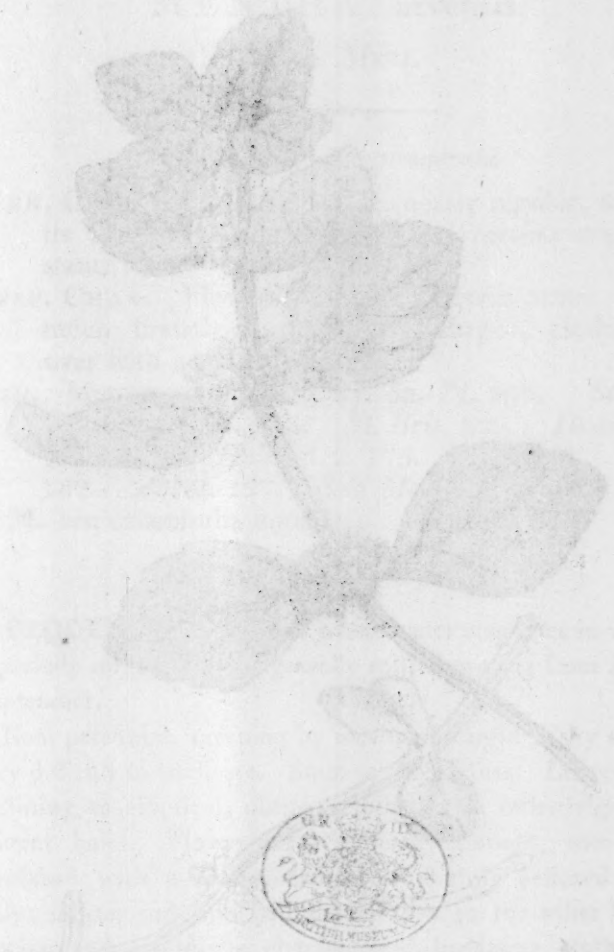
SPEC. CHAR. Flowers whorled. Leaves ovate. Stem much branched, spreading. Flower-stalks and base of the calyx smooth.

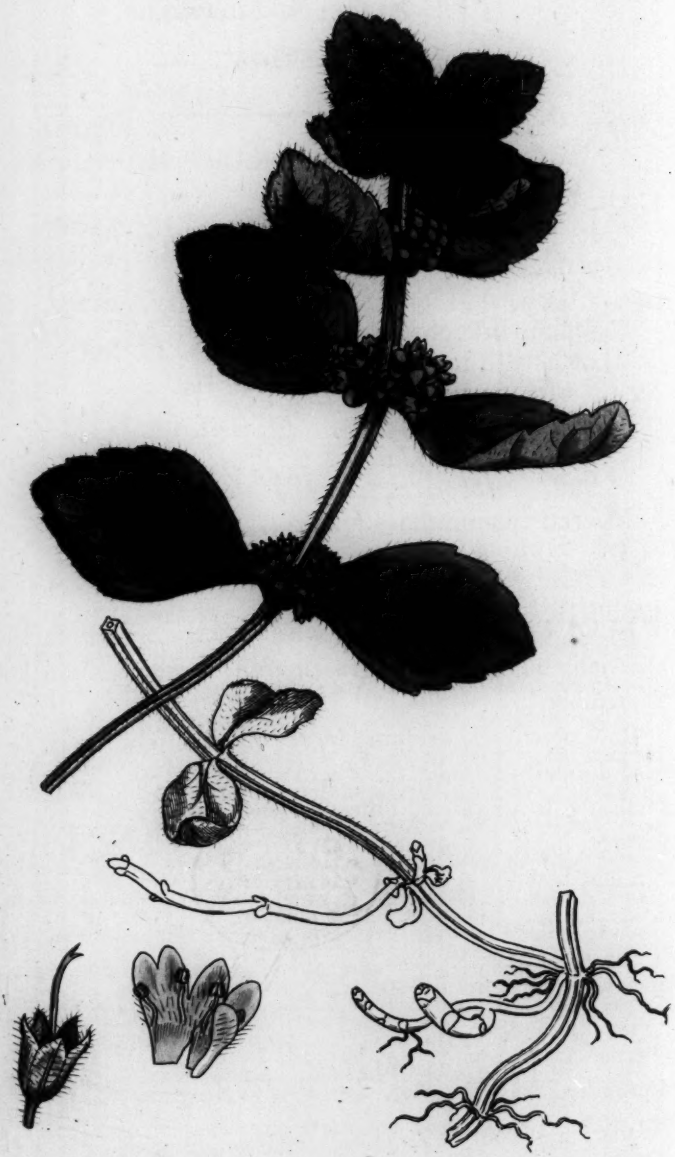
SYN. Mentha gentilis. *Linn. Sp. Pl.* 805. *Sm. Tr. of L. Soc. v.* 5. 208. *Fl. Brit.* 621. *Hull. ed.* 2. 173.
M. rubra. *Sole Menth.* 41. *t.* 18.
β. M. rivalis α. *ib.* 45. *t.* 20.
γ. M. variegata. *ib.* 43. *t.* 19.
M. arvensis verticillata versicolor. *Moris. sect.* 11. *t.* 7. *f.* 5.

NATIVE of watery places, but rare, flowering in August and September. Our specimen was gathered at Edgefield near Holt, by Mr. Borrer and Mr. Hooker. The Rev. Mr. Williams has sent the same from Shropshire.

The stem is usually 12 or 18 inches high, erect, very bushy in consequence of the numerous opposite spreading branches, and quite different from the very tall, slender, zigzag habit of *M. rubra*, *t.* 1413, to which its specific character approaches in other points. The whole plant however is paler than in that, and rougher; leaves more uniform, and less rounded; whorls nearly sessile, except occasionally in the varieties; calyx rough with upright hairs on the upper half; sometimes the bottom and stalk, though usually smooth and polished, bear each a few scattered hairs, those on the latter being, in such case, deflexed. Stamens hardly longer than the corolla.

The variety γ, striped with yellow, is often cultivated by poor people in windows or cottage gardens for its beauty and scent. This species especially is improved in fragrance by growing in a dry soil.





Feb 1 1810 published by J. Sowerby London.

MENTHA arvensis.

Corn Mint.

DIDYNAMIA Gymnospermia.

GEN. CHAR. *Cal.* 5-cleft. *Cor.* nearly regular, 4-cleft; its broadest segment notched. *Stamina* erect, distant.

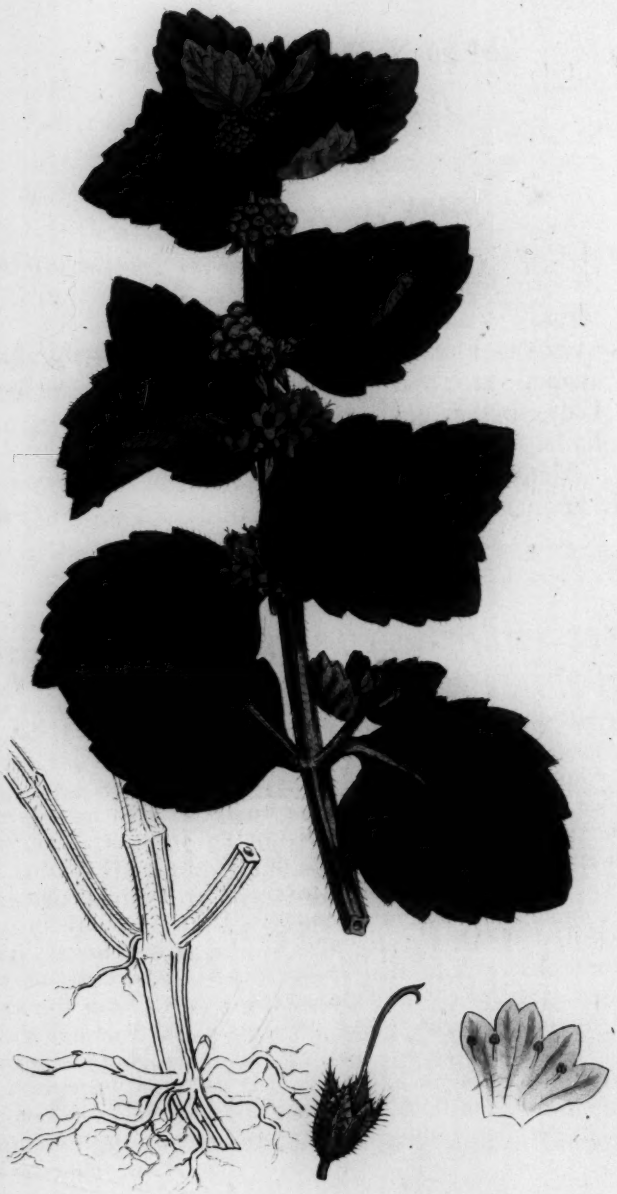
SPEC. CHAR. Flowers whorled. Leaves ovate. Stem much branched. Calyx bell-shaped, clothed all over with horizontal hairs.

SYN. Mentha arvensis. *Linn. Sp. Pl.* 806. *Sm. Tr. of L. Soc. v.* 5. 213. *Fl. Brit.* 623. *Huds.* 253. *With.* 524. *Hull. ed.* 2. 173. *Relh.* 228. *Sibth.* 182. *Abbot.* 127. *Sole Menth.* 29. *t.* 12.

M. seu calamintha aquatica. *Raii Syn.* 232.

FREQUENT in corn-fields where water stagnates in winter, especially on a sandy or gravelly soil, flowering from July to September.

Root perennial, creeping by means of turgid fleshy shoots, very difficult to eradicate. Stem mostly diffuse. Leaves ovate inclining to elliptical, obtuse, clothed with rather rigid prominent hairs. Flower-stalks generally smooth, sometimes furnished with a few spreading or slightly deflexed hairs. Calyx shorter and more bell-shaped than in the other British species, and essentially characterized by being clothed all over with horizontally-spreading hairs. Flowers reddish-lilac. The scent of this species is justly compared to the flavour of cheese covered with blue mould, by which all the varieties mentioned in *Fl. Brit.* are also distinguished. Of these Mr. Sole's *M. præcox* has more smooth and neatly elliptical leaves than the rest, but we cannot find sufficient reasons to make it a distinct species. Of his *agrestis* we shall speak in the next page.



Feb 1 1820 published by J.t Sowerby, London

MENTHA agrestis.

Rugged Field Mint.

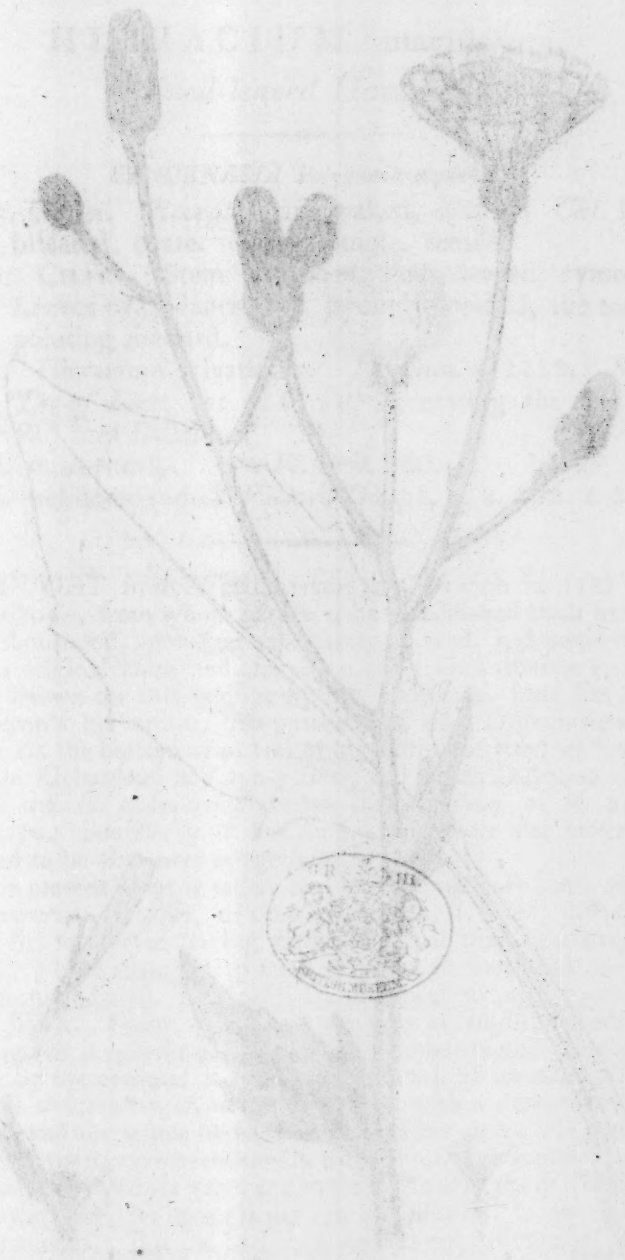
DIDYNAMIA Gymnospermia.

GEN. CHAR. *Cal.* 5-cleft. *Cor.* nearly regular, 4-cleft; its broadest segment notched. *Stamina* erect, distant.

SPEC. CHAR. Flowers whorled. Leaves somewhat heart-shaped, strongly serrated, rugose. Stem erect. Calyx bell-shaped, clothed all over with horizontal hairs.

SYN. Mentha agrestis. *Sole Mentha.* 33. *t.* 14.
M. arvensis ε. *Sm. Fl. Brit.* 624. *Tr. of L. Soc. v.* 5. 213, 216.

OBSERVED by the late Mr. Sole in corn-fields and neglected gardens in Somersetshire. Some plants for which I am indebted to his kindness having now for eleven years entirely preserved their original appearance and characters, I think it right to make this Mint known, which Mr. Borrer says is very common in Sussex. How far the erect stem, and roundish-heartshaped, rugged, strongly serrated leaves, may be thought a sufficient specific distinction from *arvensis*, with which it agrees in more essential points, I greatly doubt, but I leave to the judgment of others. Their permanency in a dry garden, under various treatment, is in their favour; for the varieties of *M. hirsuta*, and of the spiked mints, have, under my observation, frequently changed according to seasons and situations. The characters deduced from the calyx and its hairs, however, prove certain; but it does not always follow that two *Menthæ* agreeing in those, *must* otherwise be one species, though I have scarcely found an exception, if the present be not one. If this clue to a true knowledge of these difficult plants obliged me to dissent from my intelligent and experienced correspondent, as well as from many of the first botanists, it was not without due respect to their merits. Mr. Sole and Mr. Pitchford were preeminent in the knowledge of the various mints; we merely differed as to some of them being species or varieties, and my peculiar advantages only enabled me to correct their nomenclature.



Mar 1st published by J. Sowerby London.

HIERACIUM maculatum.

Stained-leaved Hawkweed.

SYNGENESIA Polygamia-æqualis.

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem branched, many-leaved, cymose. Leaves ovato-lanceolate, strongly toothed, the teeth pointing forward.

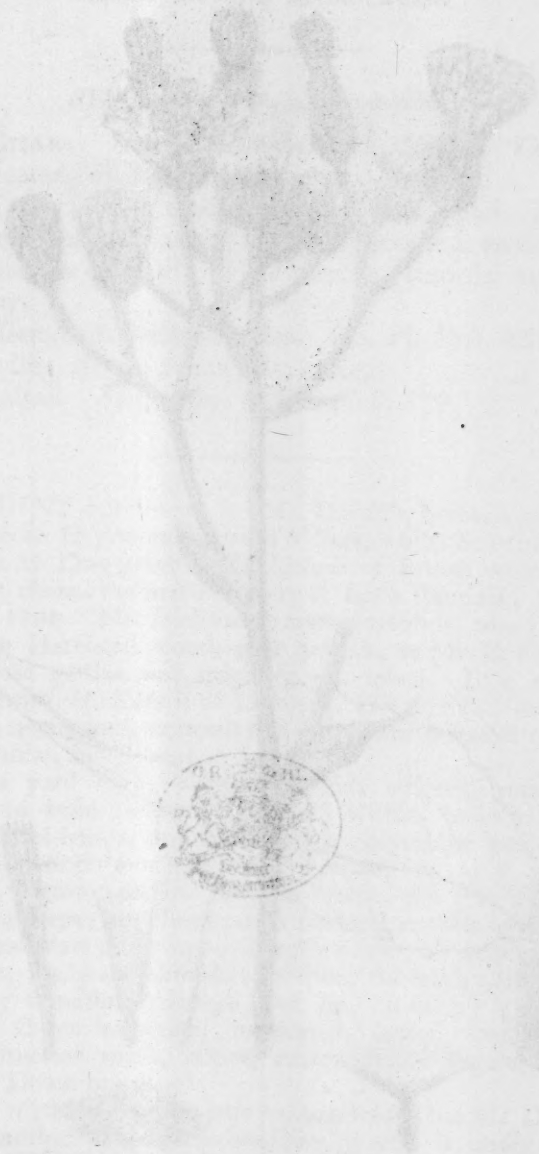
SYN. Hieracium sylvaticum. *Fl. Dan. t.* 1113. *Sm. Tr. of Linn. Soc. v.* 9. 240 β, erasing the syn. of Ray and Dillenius.

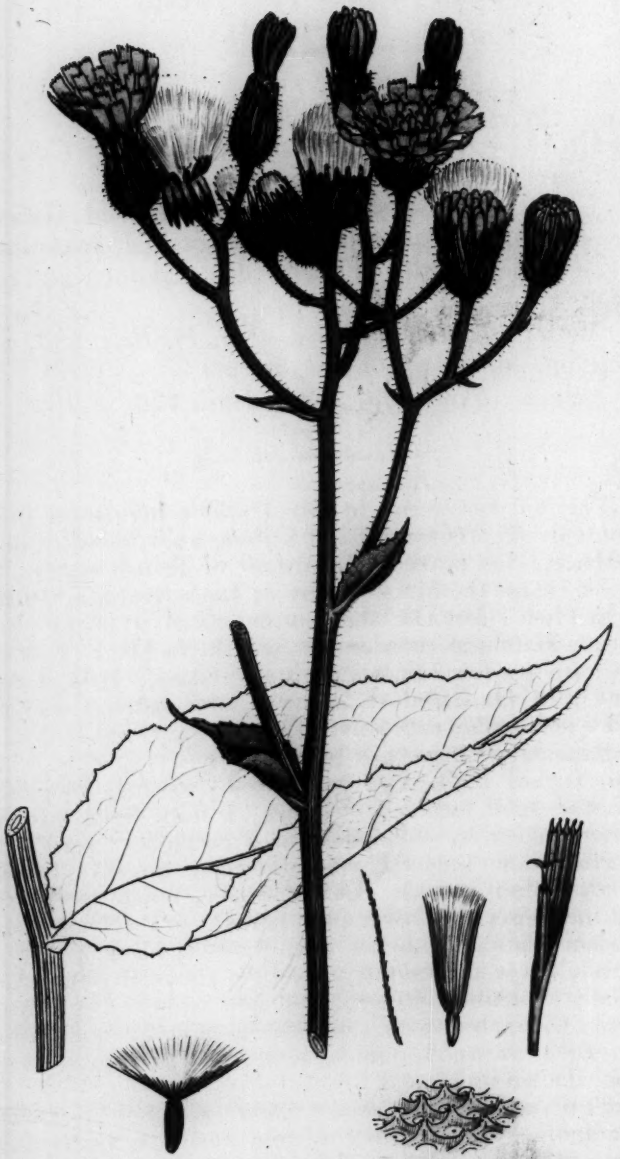
H. murorum γ. *Sm. Fl. Brit.* 830.

H. pulmonarioides. *Villars Dauph. v.* 3. 133. *t.* 34?

BROUGHT from Westmoreland to Norwich in 1781 by Mr. Crowe, from whose garden it has established itself in the neighbourhood, spreading extensively by seed, and preserving all its original habit and characters. By the authentic specimen shown me this spring, by Mr. Hailstone, from Dr. Richardson's herbarium, this proves to be what Dillenius mentions (at the bottom of p. 168 of his edition of Ray) as found by Dr. Richardson at *Lhyn y cwm*, and which Dillenius supposed the *H. pulmonaria dictum angustifolium* of *R. Syn. ed.* 2. 74. See *Tr. of L. Soc. v.* 9. 238, where the latter is proved to be *Cineraria integrifolia*.

Our present plant is taller, and has a more leafy stem, than *H. murorum*, *t.* 2082, or even *sylvaticum*, *t.* 2031, differing from the former in having rather elliptical than heartshaped leaves, whose strong deep teeth all point forward and are by no means radiated. The leaves are moreover strongly speckled with black. From *sylvaticum* we now at length venture to distinguish it specifically by the size of those teeth, but especially by the cymose, not panicled, growth of its stem. The flowers also are larger, more numerous, with a darker thicker calyx, and the whole herbage is of a darker green. It is perennial, and flowers occasionally throughout the summer and autumn.——We are more and more inclined to think Villars's plant the same, its leaves being spotted likewise, to which his name alludes. But the barbarous hybrid construction of that name is best avoided. The stem in his is nearly solid, in ours decidedly hollow, and we are not competent to say how material that difference may be.





Mar 1 1810 published by J.t Sowerby London.

HIERACIUM denticulatum.

Small-toothed Hawkweed.

SYNGENESIA Polygamia-æqualis.

GEN. CHAR. *Recept.* nearly naked, dotted. *Cal.* imbricated, ovate. *Down* simple, sessile.

SPEC. CHAR. Stem erect, many-flowered, solid. Leaves sessile, elliptic-lanceolate, finely toothed, smoothish, glaucous beneath. Flowerstalks glandular and cottony.

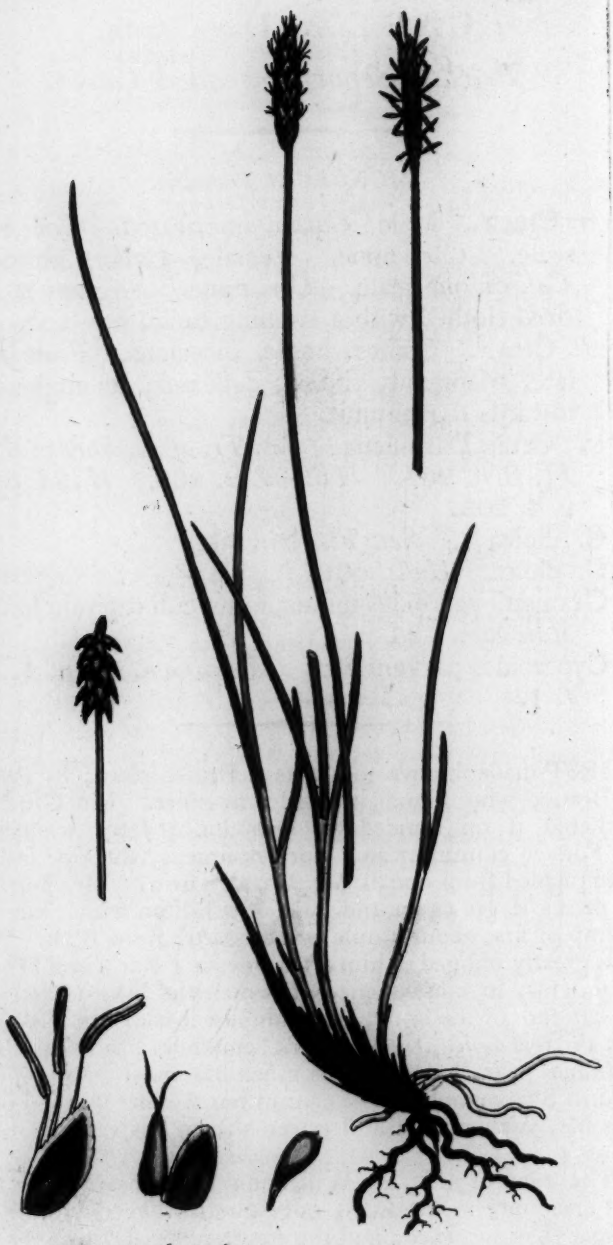
SYN. Hieracium prenanthoides. *Sm. Fl. Brit.* 835, excluding all the synonyms, except

H. Kalmii. *Sym. Syn.* 173. *Hull.* 176.

DAUPHINY specimens in Mr. Davall's herbarium show this not to be *H. prenanthoides* of Villars, whilst Scottish ones from Mr. G. Don prove it *H. Kalmii* of British writers, of which he claims the first discovery at Loch Rannach, Perthshire, in 1794. Mr. Dickson communicated it, many years ago, from Harehead wood, near Selkirk, to Mr. E. Forster, from whose garden our specimen was taken. It is widely different from *H. Kalmii* of Linnæus, and therefore we have given it a new name, expressive of one of the essential marks. It is perennial, and flowers in July.

Stem a yard high, upright, round, striated, roughish, spongy and solid (scarcely fistulous) within, beset with several alternate leaves, and ending in a corymbose panicle of many full-yellow moderate-sized flowers, on very hispid, glandular, cottony stalks. Leaves sessile, not properly embracing the stem; the lower ones tapering at their base, and elliptic-lanceolate; the upper exactly ovate; all acute, thin, smoothish, finely and minutely toothed, the teeth obtuse and glandular; sometimes fringed, but not strongly; glaucous beneath. Calyx brownish, muricated, cottony and rather viscid. Bracteas small, entire, acute. Seeds angular, very smooth. Down rough.

Haller's n°. 43 proves the true *prenanthoides*, but Mr. Davall thought another species was confounded with it under that number. Whether either of these be really British, we must leave for future inquiry, the difficulties relating to this genus not being yet all removed.



Mar 1 1810 published by J.t Sowerby London

CAREX Davalliana.

Prickly Separate-headed Carex.

MONOECIA Triandria.

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of one scale. *Cor.* none. Female, *Catkin* imbricated. *Cal.* of one scale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a swelling tunic.

SPEC. CHAR. Spikes simple, dioecious. Fruit lanceolate, triangular, ribbed, deflexed; its angles rough towards the summit.

SYN. Carex Davalliana. *Sm. Tr. of L. Soc. v. 5. 266. Fl. Brit. 964. Hull. ed. 2. 268. Willd. Sp. Pl. v. 4. 208.*

C. dioica β. *Sm. Fl. Brit. 964.*

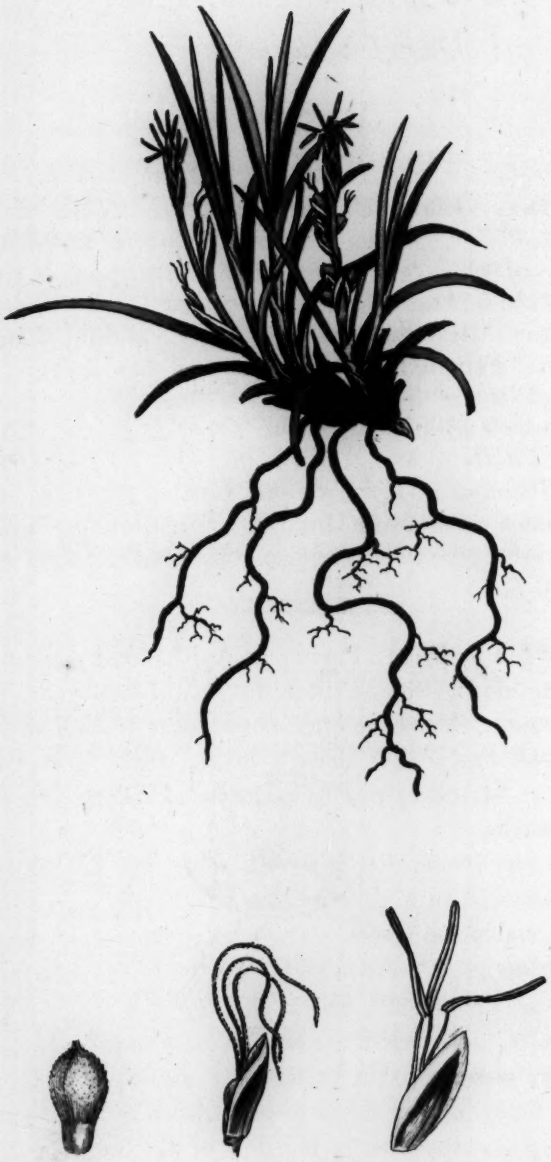
C. dioica. *Huds. 401.*

Gramen cyperoides minus, ranunculi capitulo longiore. *Raii Syn. 425.*

Cyperoides parvum &c. *Mich. Gen. 56. n. 1. t. 32. f. 1.*

FIRST made known to us, as a British plant, by Professor J. Beatie, who found it in Mearns-shire. Mr. Groult next gathered it on Landsdown near Bath, from whence Mr. E. Forster communicated our specimens, the ripe fruit only being added from one of Mr. Davall's own. Mr. Forster informs us it grows on the slope of a hill on which there is a clump of firs, about a mile and a quarter from Bath. We are also greatly obliged to him for suggesting Ray's and Hudson's synonyms, in consequence of which the long-unascertained *C. capitata* of the latter, certainly not that of Linnæus, turns out the real *dioica*, *t. 543*. Mr. Templeton has found the *Davalliana* near Belfast. It is much the most common of the two in Switzerland. We cannot but wonder that the observing Mr. Wahlenberg still esteems them but varieties of each other.

The root of this, as Willdenow well observes, is tufted, not creeping; stem rough, not smooth. The spikes are much longer than in *dioica*, and the long, reflexed, strongly ribbed seed-covers, roughish only at the angles near the top, not serrated, are abundantly characteristic.



Mar 1 1810 published by J.t Rose & Co London

CAREX clandestina.

Dwarf Silvery Carex.

MONOECIA Triandria.

GEN. CHAR. Male, *Catkin* imbricated. *Cal.* of one scale. *Cor.* none. Female, *Catkin* imbricated. *Cal.* of one scale. *Cor.* none. *Stigmas* 2 or 3. *Seed* clothed with a swelling tunic.

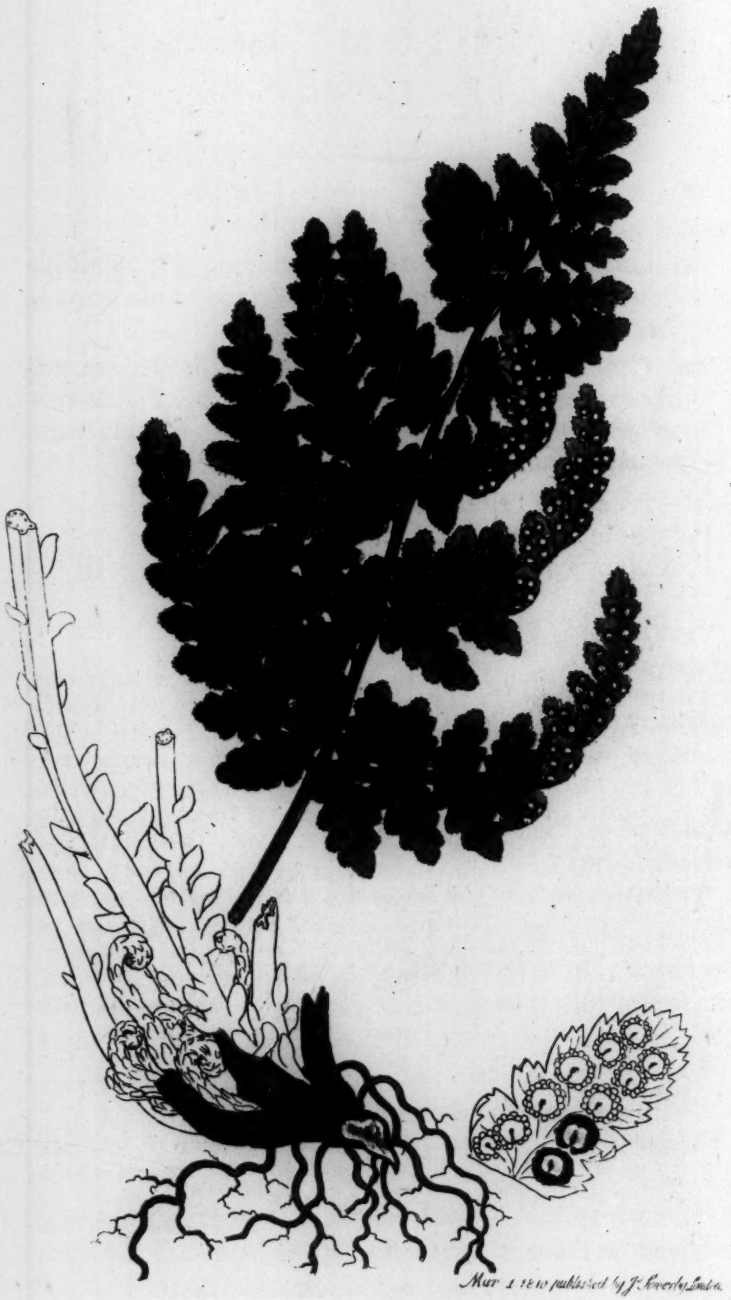
SPEC. CHAR. Bracteas membranous, sheathing, scarcely leafy. Female spikes remote, of few flowers, inclosed in the sheaths. Leaves channelled.

SYN. Carex clandestina. *Gooden. Tr. of L. Soc. v.* 2. 167. *Sm. Fl. Brit.* 980. *With.* 96. *Hull.* 206. *Willd. Sp. Pl. v.* 4. 254. *Schkuhr. Car. n.* 67. *t.* K. 43.

Cyperoides montanum humile angustifolium, culmo veluti folioso spicis obsesso. *Scheuchz. Agr.* 407. *t.* 10. *f.* 1.

GATHERED by Mr. E. Forster in April 1809 by the foot-path leading down from Clifton to Bristol hot-wells, in a very sunny spot. We have often observed it in similar parts of the neighbouring St. Vincent's rocks, where it was first discovered by Mr. Sole, nor do we know of its growing elsewhere in Britain.

This has very strong deep perennial roots, and flowers early in spring, when its little silvery bracteas are easily seen among the humble stalks and leaves. The whole plant while flowering is only an inch or two high, but the leaves soon grow taller, and are channelled, erect, narrow, very rough-edged. Spikes slender, with reddish silvery-edged glumes. Stigmas 3, very long, separate to the bottom. Fruit obovate, slightly triangular, finely downy when young, entire at the mouth. The male spikes are solitary; female 2 or 3. Sometimes an early female spike throws out a stalk bearing a later male one, as in our specimen. As the fruit ripens, the stem and leaves become greatly lengthened, and the bracteas disappear.



May 1 1818 published by J. Sowerby London

ASPIDIUM cristatum.

Lesser Crested Shield-fern.

CRYPTOGAMIA Filices.

GEN. CHAR. *Fructifications* scattered, in roundish dots, not marginal. *Involucrum* umbilicated, bursting almost all round.

SPEC. CHAR. Frond nearly bipinnate; leaflets ovate, obtuse, crenate or pinnatifid, with sharp little terminal teeth. Stalk scaly at the base. Involucrum nearly circular.

SYN. Aspidium cristatum. *Swartz. Fil.* 52.
Polypodium cristatum. *Linn. Sp. Pl.* 1551.
P. Callipteris. *Ehrh. Crypt.* 53.

HAVING unfortunately been misled to figure a wrong plant under this name in *t.* 1949, we find it necessary now to exhibit the true one, gathered by the Rev. R. B. Francis in the low boggy parts of the heath between Holt and Hempstead, Norfolk, and to draw up our definition and description afresh.

Root tufted. Fronds pale green, 1 or 2 feet high, linear-lanceolate, the fertile ones, as Mr. Francis observes, remarkably erect, in which the leaves are more alternate than in the barren ones. The leaves (or *pinnæ*) are of moderate length, very deeply pinnatifid, acute; their segments or leaflets close, broad, obtuse, either crenate or slightly pinnatifid, their ends and lobes bearing sharp, scarcely spinous, little teeth. Ribs somewhat zigzag. Dots of capsules blackish when fresh, with a white nearly circular involucrum, the whole becoming tawny when dried. They are ranged equally in single rows along each side of every fertile leaflet. Common stalk scaly at its base chiefly.

The isle of Wight plant, *t.* 1949, is supposed to be only a variety of *A. Filix mas*, *t.* 1458, and its sweet scent, which still remains in the dried specimens, to be adventitious. Can this be what Hudson mistook for *Polypodium fragrans?* See the remark at the bottom of our *p.* 1019.

Marsh. sc. published by T. Laverby, London

HYPNUM dubium.

Fine Curve-leaved Feather-moss.

CRYPTOGAMIA Musci.

GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stem prostrate, pinnate. Leaves ovate, pointed, single-ribbed, curved towards one side; the uppermost sickle-shaped. Lid conical.

SYN. Hypnum dubium. *Necker. Musc.* 161. *Sm. Fl. Brit.* 1332. *Dicks. Crypt. fasc.* 3. 10. *H. Sicc. fasc.* 13. 23. *With.* 854. *Hull.* 271. *Turn. Musc. Hib.* 195. *Hoffm. Germ. v.* 2. 71. *Bridel. Musc. v.* 3. 64.

H. filicinum β. *Huds.* 498.

H. repens filicinum trichodes palustre. *Dill. Musc.* 286. *t.* 36. *f.* 21. *Raii Syn.* 85. *n.* 31 & *n.* 28.

Leskea incurvata. *Hedw. Sp. Musc.* 216. *t.* 53. *f.* 8—14.

OUR figure is drawn from a specimen in Mr. Turner's collection, gathered by the late Dr. Scott in a rivulet at Luttrell's town, Ireland.

The stems are 2 or 3 inches long, prostrate, leafy, irregularly pinnated, with short, curved branches. Leaves of a dull yellowish green, ovate, pointed, entire in their lower part, finely serrated upward, with a strong rib; those on the stem broad, closely imbricated; those on the branches more or less falcate, curved to one side, and longer-pointed; all of them frequently furnished with a fold or furrow on each side of the rib. Fruitstalks an inch and half long, wavy, purple. Sheath of several pale, ovate, striated, acute leaves, justly observed by Mr. Turner to be finely toothed, at least near the point. Capsule ovate inclining to cylindrical, brown, smooth, drooping, finally curved; a little contracted below the mouth. Lid, according to Hedwig and Dillenius, conical and short.

HYPNUM dubium.

Fine Curve-leaved Feather-moss.

CRYPTOGAMIA Musci.

Gen. Char. Caps. ovate-oblong, from a lateral scaly sheath. Outer fringe of 16 teeth, dilated at the base; inner a variously-toothed membrane. Veil smooth.

Spec. Char. Stem prostrate, pinnate. Leaves ovate, pointed, single-ribbed, curved towards one side; the uppermost sickle-shaped. Veil conical.

Syn. Hypnum dubium. Linn. Mus. 181. Sm. Fl. Brit. 1332. Dicks. Crypt. Fasc. 3. 10. H. Sibe. Fasc. 13. 23. With. 834. Hull. 271. Turn. Musc. Hib. 193. Hedw. Germ. t. 2. 11. Bridel. Musc. t. 3. 6.

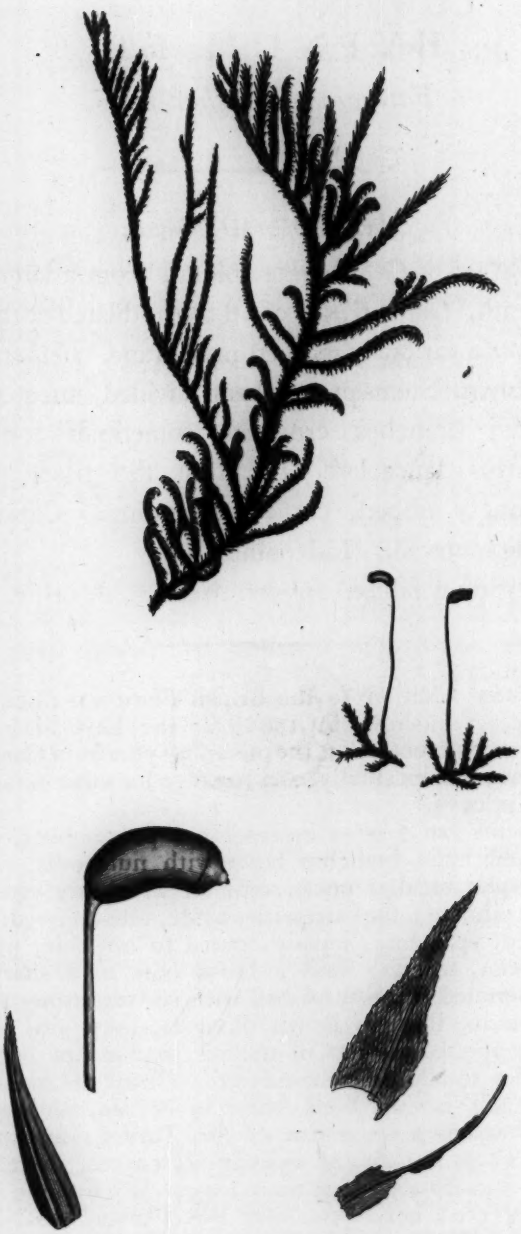
H. filicinum β. Musc. 198.

H. repens filicinum tricholes palustre. Dill. Musc. 386. t. 50. f. 21. Raii Syn. 85. n. 31 & n. 28.

Leskea incurvata. Hedw. Sp. Musc. 216. t. 32. f. 8—14.

OUR figure is drawn from a specimen in Mr. Turner's collection, gathered by the late Dr. Scott in a rivulet at Lifford, Ireland.

The stems are 2 or 3 inches long, prostrate, leafy, irregularly pinnated, with short, curved branches. Leaves of a dull yellowish green, ovate, pointed, entire in their lower part, finely serrated upward, with a strong rib; those on the stem broad, closely imbricated; those on the branches more or less falcate, curved to one side, and longer-pointed; all of them frequently furnished with a fold or furrow on each side of the rib. Fructifies an inch and half long, wavy, purple. Sheath of several pale, ovate, striated, acute leaves, finely observed by Mr. Turner to be finely toothed, at least near the point. Capsule ovate inclining to cylindrical, brown, smooth, drooping, finally curved; a little contracted below the mouth. Lid, according to Hedwig and Dillenius, conical and short.



Mar 1 1814 published by J.E. Sowerby London.

HYPNUM fallax.

Fallacious Feather-moss.

CRYPTOGAMIA Musci.

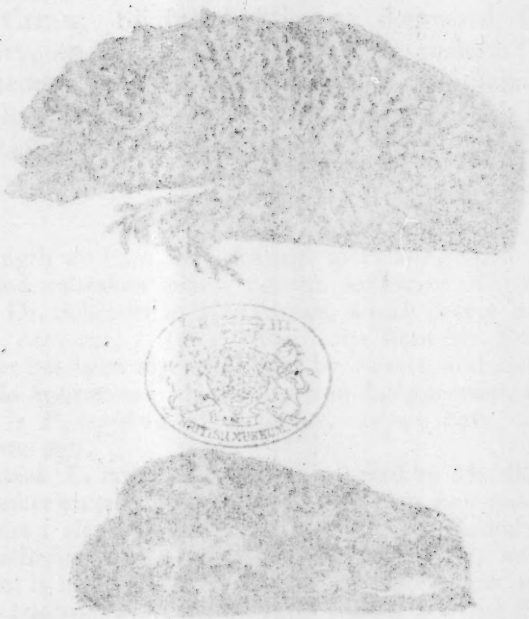
GEN. CHAR. *Caps.* ovate-oblong, from a lateral scaly sheath. *Outer fringe* of 16 teeth, dilated at the base: *inner* a variously-toothed membrane. *Veil* smooth.

SPEC. CHAR. Stems procumbent, divided, unequally pinnate; branches crowded, sometimes compound. Leaves lanceolate, broad at the base, pointed, strongly ribbed, curved, spreading. Capsule oblong, curved. Lid pointed.

SYN. Hypnum fallax. *Bridel. Musc. v.* 3. 66. *t.* 2. *f.* 1.

THIS new addition to the British *Flora* was discovered at Copgrove, Yorkshire, in 1806, by the Rev. Mr. Dalton. Mr. Turner had received it the preceding year from Cambridge, but it was sent accidentally, as a package for other things.—— It grows in bogs.

The stems are 3 or 4 inches long, procumbent, divided, leafy, their main branches beset with numerous, crowded, very unequal smaller ones, some of which are again compound or pinnate; the extremities acute, often curved. Leaves imbricated, spreading, mostly curved to one side, of a dull tawny green, tapering from a broad base to a sharp point, slightly serrated, each furnished with so very strong and lasting a midrib, that, as Bridel observes, these ribs often remain, stripped of the rest of the leaf, and assuming the character of a totally different species. Hence the name. The capsules, not having been found in Britain, nor figured by Bridel, are drawn from one of Mr. Turner's foreign specimens. They are almost cylindrical, curved, drooping, on zigzag red stalks above an inch long. We find the lid convex and pointed, but shorter than Bridel describes it. Sheaths of several dark-green lanceolate leaves, toothed at the points, with strong mid-ribs.



Mar 1 1810 published by J.t Sowerby London.

LICHEN microphyllus.

Small-leaved Cushion Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

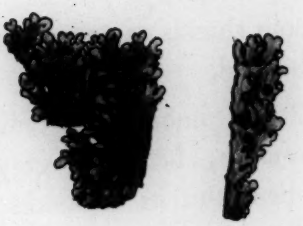
SPEC. CHAR. Slightly imbricated, depressed, fragmentary, on a dense, black, fibrous cushion: its segments grey, lobed, crenate and granulated at the edge. Shields tawny, with a pale smooth border.

SYN. Lichen microphyllus. *Schrad. Spicil.* 97. *t.* 1. *f.* 4.

AT length we have the pleasure of clearing up a very obscure and mistaken plant, on the authority of a specimen sent by Dr. Schrader to Mr. Turner, which proves it distinct from *L. carnosus*, *t.* 1684. We learn from Mr. Borrer that the latter has been repeatedly sent by Swartz and Acharius as *Parmelia hypnorum*: whereas the true *L. hypnorum*, see *v.* 11. *t.* 740, is *P. lepidora* of Acharius, as we have discovered some time ago.

This true *L. microphyllus* was gathered by Mr. Borrer and Mr. Hooker on trees at Inverary, and in glen Ach-na-shilloch, Ross-shire; also by Mr. Turner previously at Bodmin and by loch Katherine. Professor Acharius, it seems, aware that this plant is not described in his *Methodus*, means to call it *Lecidea triptophylla*; but we apprehend it is a true *Parmelia*, as well as his *Lecidea pannosa*, to which it is closely allied by its dense cushion of inky-coloured fibres, unaccountably overlooked by Professor Schrader, by which they both approach *P. plumbea*, our *Lichen plumbeus*, *t.* 353, and our *affinis*, *t.* 983. ——There is indeed but little of this cushion in the latter. It is altogether wanting in *L. carnosus*, *t.* 1684.

Young patches of the plant before us are circular, old ones irregular. The fronds, at first crowded, depressed and uneven, separate into scattered fragments, of a greyish hue, smooth above, lobed, rounded, granulated and powdery at the edges, the centre becoming almost shrubby, like some coralline, as happens decidedly in *Lichen pannosus*. Shields unfrequent, central, small, sessile, of a tawny dull orange, with a pale smooth border.



Published by J.ᵈ Sowerby London.

LICHEN dædaleus.

Fine-lobed Imbricated Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.

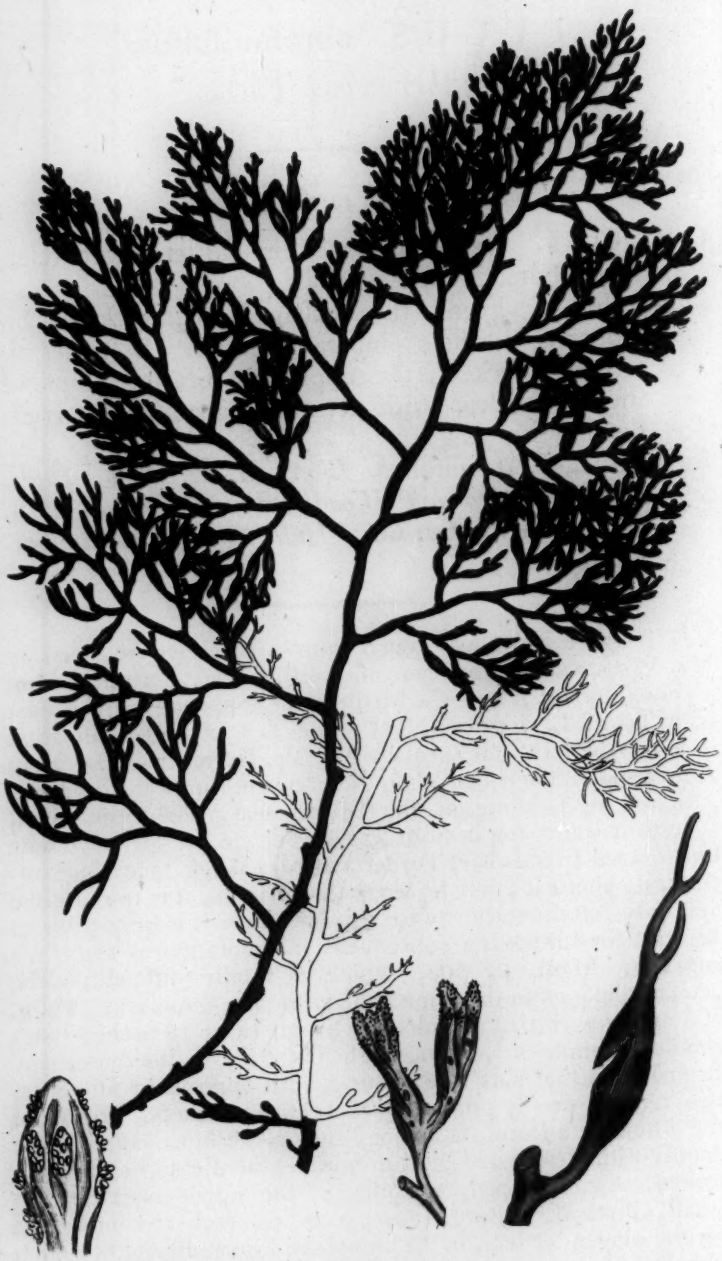
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Closely imbricated, radiated, membranous, very smooth, brownish grey; pale, with black fibres, beneath: its segments linear, obtuse, undulated. Shields black, with a black border of their own substance.

THE only specimens we have ever seen of this Lichen, were given us long ago by our worthy friend Mr. Menzies, who gathered them in Scotland, apparently on rocks.

The fronds are closely imbricated, entangled, radiated, depressed and uneven; their upper surface of a brownish, somewhat glaucous, grey, peculiarly smooth, but not shining, often blackish here and there, especially at the edges; pale brown or flesh-coloured and uneven beneath, and clothed with black radicles, often quite black except at the extremities. The segments are linear, curiously zigzag, undulated, or crenate; obtuse, lobed, and often dilated at the ends, closely folded or creeping over each other; bearing several grey, globular, powdery, marginal warts. Shields scattered over the disk of the leaf, the size of a common pin's head, sessile, very black, with an elevated entire border of their own substance and colour.

This species is a true *Lecidea*, according to the system of Acharius, and ranks among the very few with a leafy or membranous frond, but we cannot find any mention of it in the works of that eminent writer. The want of an accessary border to the shields, of the colour and substance of the crust, is the distinctive character of a *Lecidea*, and readily distinguishes this species from the numerous imbricated Lichens, which, having such a border, are *Parmeliæ*.



Mar. 1810 published by J.ᵈ Sowerby London.

FUCUS abrotanifolius.

Southernwood Fucus.

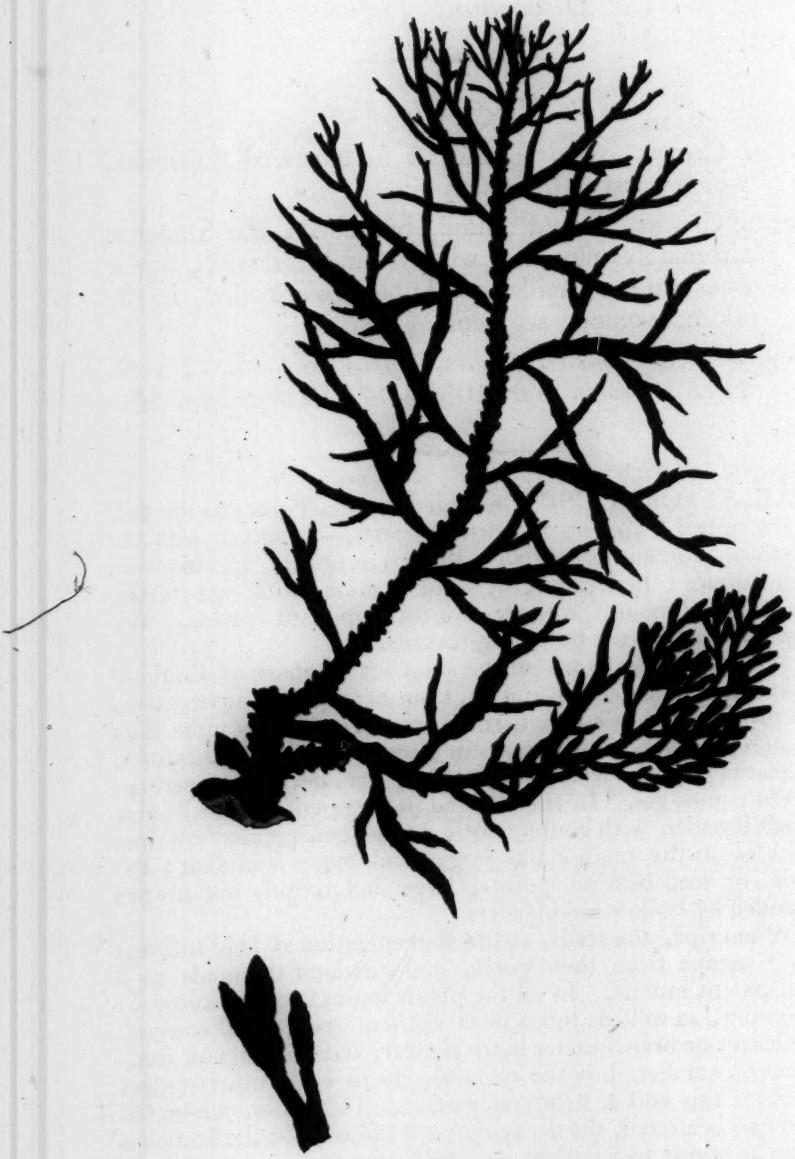
CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond thread-shaped, compressed, bipinnate. Leaflets pinnatifid, entire. Branches alternately forked; the uppermost bearing elliptical innate vesicles, with terminal, many-cleft, fruit-bearing segments.

SYN. Fucus abrotanifolius. *Linn. Sp. Pl.* 1629. *Huds.* 575. *Gooden. and Woodw. Tr. of L. Soc. v. 3.* 126. *Turn. Syn.* 66. *Hull.* 317. *Stackh. Ner.* 86. *t.* 14.

OUR figure *No.* 1 was drawn from a specimen received by Mr. Woodward from Devonshire. The leafy bottom part of a younger plant *f.* 2, is the Mediterranean specimen, mentioned in Tr. of L. Soc. v. 3, 127; and *f.* 3 is the fructification in a very perfect state, sent by Mr. W. Borrer from Sussex in June 1804. There can be no doubt of the Linnæan specimen, gathered by Loefling in the British seas, being the same, though it wants the bottom leaves, nor do we perceive why our learned friends Mr. Turner and Mr. Wigg found any uncertainty about it; but however that may be, it is the original and only certain authority for this species. It is impossible to account for Linnæus's subsequent misquotation of Gmelin's *capensis*, Mant. 2. 508, which is totally different.—The present belongs to the same tribe with *F. fibrosus*, *t.* 1969, and agrees with that in colour. Frond 12 or 18 inches long, slender, compressed, often rough like a file at the base, and furnished in that part when young, with opposite or alternate, two-ranked, deeply pinnatifid, flat, entire leaflets, (for so, if the whole be a frond, as analogy shows, we must call them): doubly pinnate upwards, the pinnæ repeatedly and alternately forked, thread-shaped, spreading; the upper ones bearing small, elliptical, solitary, innate vesicles, each crowned with several cloven leaflets, in the blunter and more dilated of which numerous seeds are lodged in oblong clefts. We refer the reader to *F. discors*, *t.* 2131, for further remarks relative to the plant before us.



May 1 1810 published by J.t Sowerby London.

FUCUS discors.

Discordant Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

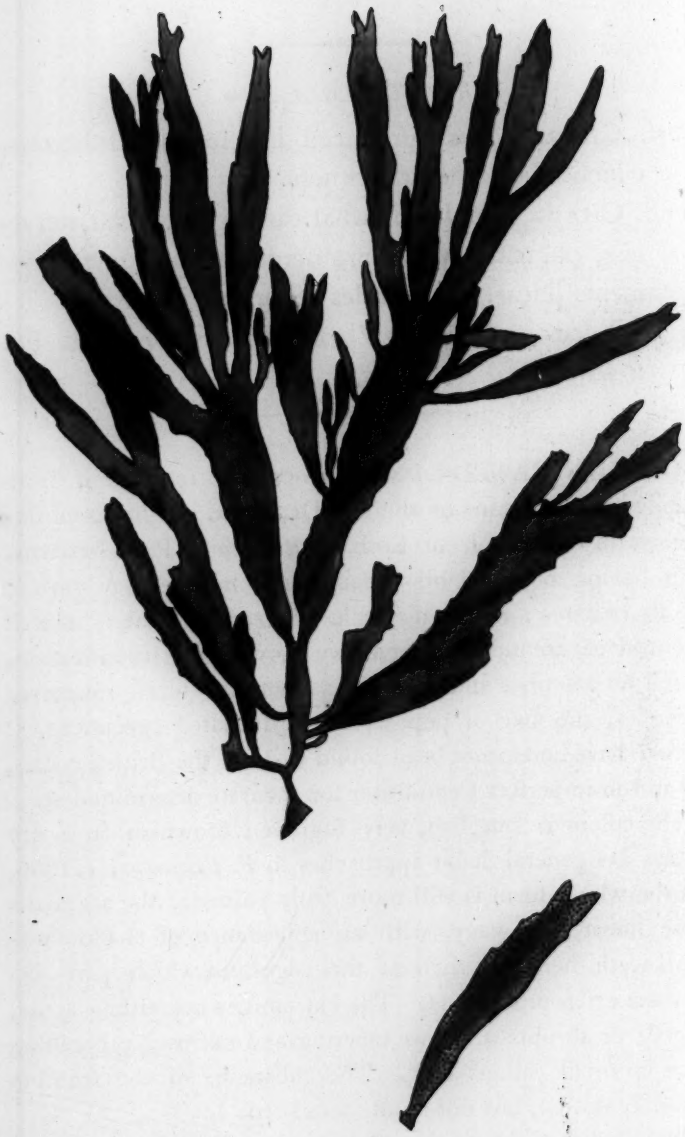
SPEC. CHAR. Frond round, branched; the branches alternately pinnate, winged and serrated; upper ones almost capillary. Tubercles crowded, in the ultimate oblong segments.

SYN. Fucus discors. *Linn. Syst. Nat. ed.* 12. *v.* 2. 717. *Stackh. Ner.* 108. *t.* 17. *Turn. Syn.* 70.

MR. STACKHOUSE is recorded by Mr. Turner as the first finder of this *Fucus* on the British coasts.—It agrees with the two authentic and indubitable, though imperfect, specimens in the Linnæan herbarium, by which alone, with our worthy friend's permission, we ascertain this supposed species. We say *supposed* for the following reasons.

Mrs. Griffiths, to whom the submarine botany of England is so much indebted, assures us, from her repeated observations on the Devonshire coast, that the present is nothing more than *F. abrotanifolius*, as it appears in the early part of the summer, in places scarcely ever left exposed by the tide, except perhaps at the equinoxes. In this we find the segments of the leaflets much broader, with consequently a more conspicuous rib; the prickles on the main stalks larger and more abundant; the pods, or seed-bearing points, large and turgid, not always attended by hollow air-bladders.

When ripe, the seeds, as the abovementioned lady informs us, "escape from their pores, and surround the pods in a transparent mucus. In all the plants found late in autumn or in winter, as well as those from *shallow pools* at all seasons, the leaves or branches are more slender, and the parts of fructification smaller, but the resemblance in every other respect (betwixt this and *t.* 2130) is perfect. In winter, when the seeds are scattered, the decaying parts fall off, but the branches often continue to lengthen, and make vigorous shoots. Soon after, the fruit begins to appear, and the seeds are in a progressive state till the summer following. Some plants seem to have stood the storms of many winters."



Morrison published by J.t Sowerby London.

FUCUS sarniensis.

Guernsey Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

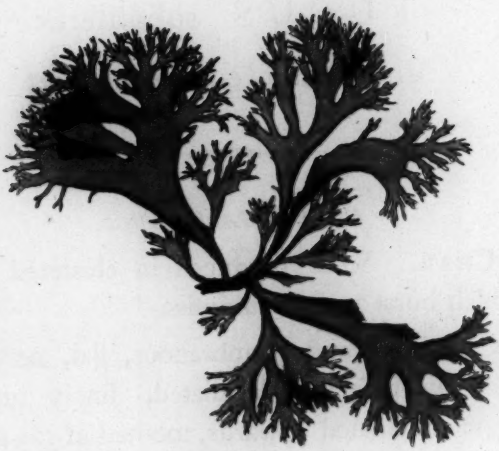
SPEC. CHAR. Frond somewhat cartilaginous, flat, nerveless, palmate, wavy, proliferous at the edges: segments linear. Tubercles spherical, immersed.

SYN. Fucus sarniensis. *Turn. Hist. Fucor. v.* 1. 95. *t.* 44.

COMMUNICATED by Mr. Turner, who received it from Dublin bay, by means of the late Dr. Scott. It has been described in the 3d vol. of Roth's *Catalecta* by Prof. Mertens, who having obtained his specimens from Guernsey gave it the above name; and to that able writer, Mr. Turner, as well as ourselves, are indebted for all we know of the fructification, which he describes and figures as roundish black immersed tubercles, the size of poppy seed. Mutilated specimens, it seems, have heretofore been found cast on the British coasts, but in too imperfect a condition for accurate determination.

The colour is purplish, very fugitive; brownish in a dry state. Its general habit approaches to *F. palmatus, t.* 1306, but the whole form is still more truly palmate, the segments more linear, and wavy, with an appearance of shallow unequal teeth here and there at the edges, in which part also they are often proliferous. The extremities are either acute, jagged, or abrupt; the base tapering and narrow, proceeding from a small callous disk. The substance of the frond is minutely dotted, but not at all reticulated.

Mr. Turner observes that the frond easily splits into two membranes, and is occasionally found perforated here and there with small oblong holes.



Apl 1 1814 Published by J. Sowerby London.

FUCUS soboliferus.

Many-branched Red Fucus.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

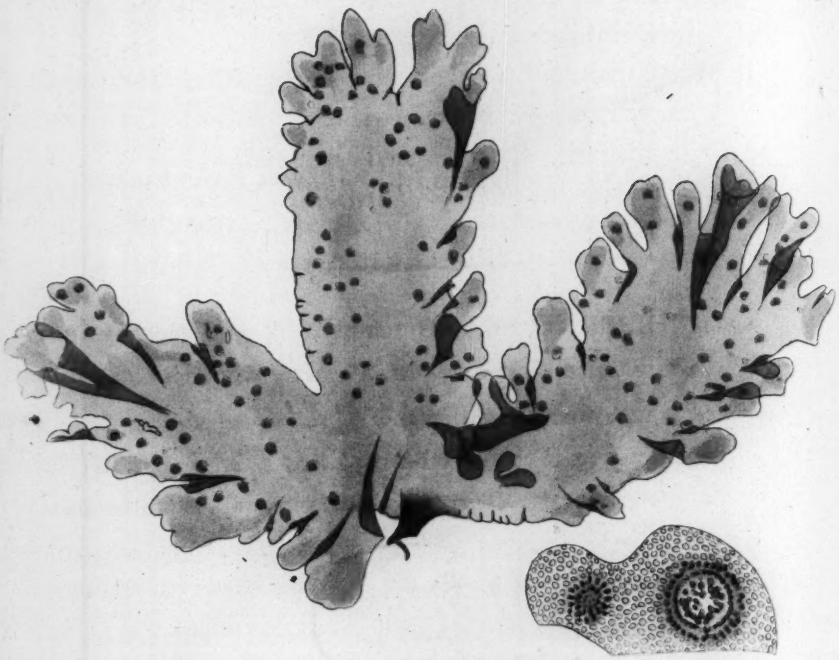
SPEC. CHAR. Frond membranous, flat, nerveless, repeatedly palmate, laciniated, finely reticulated: segments dilated upwards, toothed at the extremity.

SYN. Fucus soboliferus. *Fl. Dan. t.* 1065. *Turn. Hist. Fucor. v.* 1. 97. *t.* 45.

OUR broadest specimen, gathered by the late Rev. Dr. Walker in the Mull of Galway, was communicated by Mr. Turner; that with narrower segments was found on the shores of Orkney, growing on other *Fuci*, by Mr. Hooker and Mr. Borrer, who observed the same upon rocks in Great Loch Broom, Ross-shire.

Mr. Turner considers this as a plant of very rare occurrence, as well as of a doubtful genus, no fructification being as yet known, and the habit approaching full as nearly to *Ulva* as to *Fucus*. For the present however our learned friend follows Prof. Vahl in its arrangement, and we not only consider ourselves safe under his auspices, but we think the analogy of *F. sarniensis*, *t.* 2132, greatly confirms his determination. The present however is a far more membranous and delicate species, beautifully reticulated under a microscope, repeatedly and finely palmate, jagged and subdivided, the segments dilated upwards, or wedge-shaped, cut or toothed at their extremities. The stalk or base of the whole is slender and round, but soon becomes flattened. The colour is a fine pink or pale purple, turning yellow or whitish in decay.

It is necessary to remark that tab. 1065 and 1066 of the *Flora Danica* are wrong numbered. Our reference accords with the letter-press.



Sp.ª rec.ª published by J.ª Sowerby London.

FUCUS ulvoides.

Laver-like Fucus.

CRYPTOGAMIA Algæ.

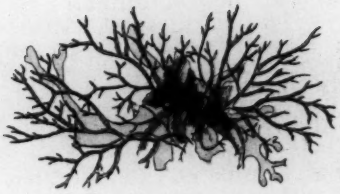
GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

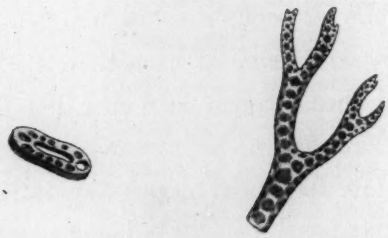
SPEC. CHAR. Frond membranous, thin, nerveless, lobed: lobes obtuse, pinnatifid, entire. Tubercles hemispherical, immersed, scattered.

SYN. Fucus ulvoides. *Turn. Hist. Fucor. v.* 2. 22. *t.* 80.

GATHERED by Miss Hutchins in Bantry bay, Ireland, and communicated to us by Mr. Turner, who alone has published any account of this plant.

Its affinity to *Fucus punctatus, t.* 1573, is too striking to be overlooked. Mr. Turner considers it as allied also to *laceratus, t.* 1067, being of an intermediate texture between the two. Its reticulated structure agrees with that of the former, not expressed in our *t.* 1573. The chief distinction seems to reside in the tubercles, which in *F. ulvoides* are enclosed in a membranous integument, round, very prominent, with a small central point. When however we consider how various in appearance the fructification of the very same *Fucus* is often found, we cannot but feel rather dissatisfied on the subject, and we submit the matter to the public, chiefly out of deference to the experience and judgment of the lady who discovered this elegant sea-weed, and of Mr. Turner, who is rather inclined to support her opinion.





Published by J. Sowerby London

FUCUS glandulosus.

Red Glandular Fucus.

CRYPTOGAMIA Algæ.

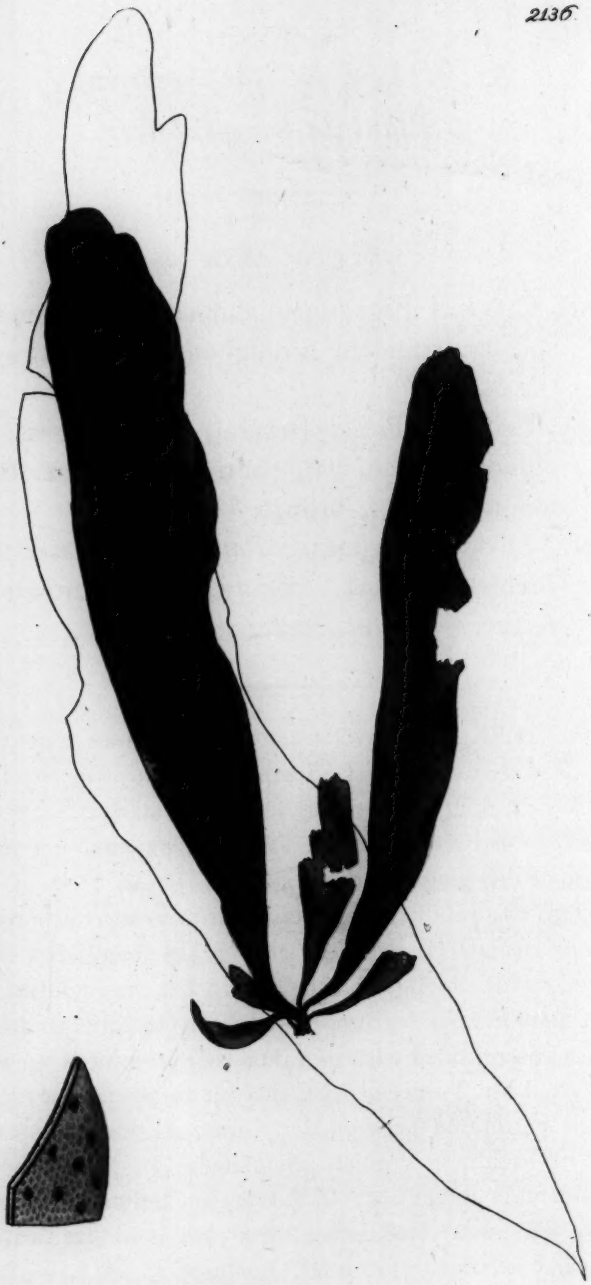
GEN. CHAR. *Seeds* produced in clustered tubercles, which burst at their summits.

SPEC. CHAR. Frond membranous, compressed, tubular, repeatedly branched, linear, nerveless, reticulated. Seeds in the oblong forked extremities.

SYN. Fucus glandulosus. *Turn. Hist. Fucor. v.* 1. 81. *t.* 38.

FOR this also we are indebted to our often-mentioned friend Mr. Turner, who favoured us with one of Mrs. Griffiths's original specimens, found cast upon the Devonshire coast. Unfortunately it had no fructification, which has been observed on some specimens by that lady in September, in the form of red grains, imbedded in the oblong, swelling, forked, obtuse points of the branches.

This is a small delicate and tender species, of a fine light red or pink colour; the fronds an inch or two long, creeping over other submarine vegetables. We find them tubular, and also highly vascular, to which perhaps the reticulated, or glandular, appearance is owing. They are variously and repeatedly branched, linear, very narrow, much compressed, forked at the ends, and somewhat abrupt or notched.—We know nothing with which this *Fucus*, if properly examined, can be confounded.



An.t 1810 published by J.t Sowerby London

ULVA plantaginea.

Plantain-leaved Laver.

CRYPTOGAMIA Algæ.

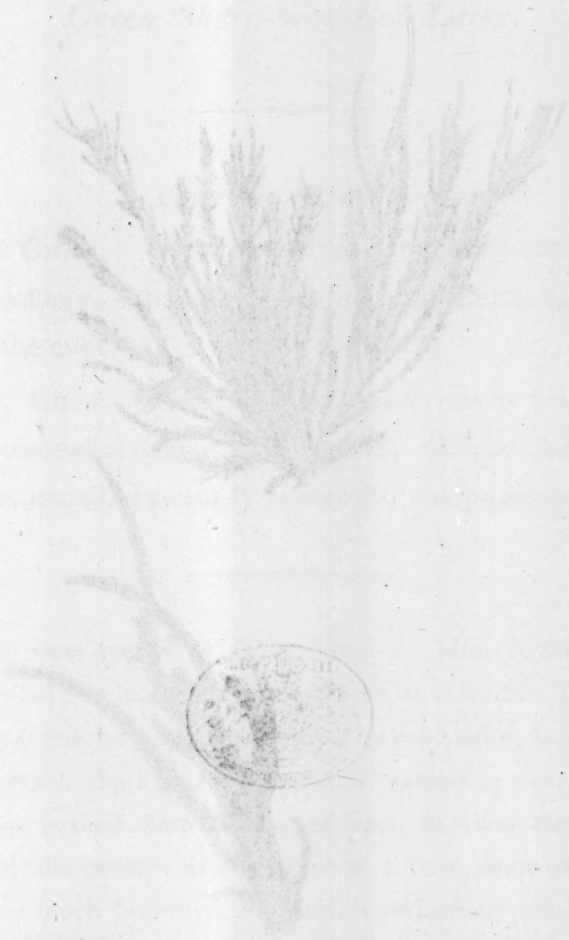
GEN. CHAR. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

SPEC. CHAR. Fronds several, membranous, simple, oblong, obtuse, flat, entire, tapering at the base, minutely warty, brown.

SYN. Ulva plantaginea. *Roth. Catal. fasc.* 2. 243. Tremella marina, calendulæ folio atro-virente et verrucoso. *Dill. Musc.* 46. *t.* 9. *f.* 4.

GATHERED by Mr. Turner on the Cromer coast, and by Mr. Borrer at Southwick, Sussex. Dillenius received it from Micheli, among whose unpublished plates, *t.* 34. *f.* 2, presented to us by his heir Mr. Targioni Tozzetti, is a very good figure of this plant, without a name.

From one small cartilaginous base arise several upright undivided fronds, from 3 to 6 or 8 inches long, of a very dull olive brown, oblong, obtuse, entire, flat, an inch broad, of a firm membranous texture, not adhering to paper in drying, its surface besprinkled with minute rather prominent warts. Dr. Roth and Mr. Turner observe that the fronds are very generally found perforated or eroded by some marine animals. The base of each is very much attenuated. In form this species considerably agrees with *U. Linza*, but differs in colour, flatness, and greater firmness of substance, as well as in its rough or warty surface. From *U. Lactuca*, *t.* 1551, with which Roth contrasts it, there can be no difficulty in distinguishing the plant before us.



Pub. as the Act directs by J. Sowerby London.

ULVA ramulosa.

Green Sharp-branched Laver.

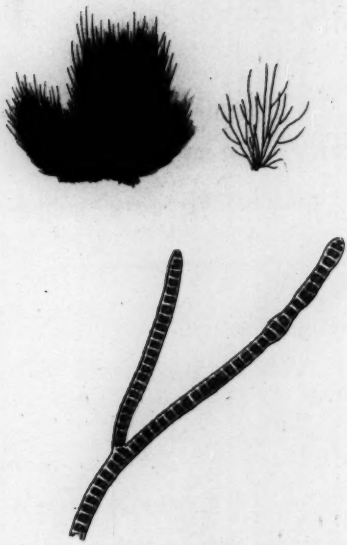
CRYPTOGAMIA Algæ.

GEN. CHAR. *Frond* membranous or gelatinous. *Seeds* solitary, scattered throughout its substance, under the cuticle.

SPEC. CHAR. Frond tubular, very much branched, somewhat compressed, green; ultimate branches scattered, extremely numerous, sharp-pointed.

THIS new species of *Ulva*, found by Miss Hutchins in Bantry bay, Ireland, was made known to us by Mr. Turner.

The fronds are numerous, repeatedly subdivided, beset with innumerable short scattered branches, various in size, but all agreeing in their sharp awl-shaped form, in which they differ from all the varieties of *U. compressa*, *t.* 1739, some of which are very much branched, but their terminations are obtuse. The colour of *U. ramulosa* is a fine green, its surface appearing under the microscope beautifully reticulated; or rather besprinkled with numerous dots, which we presume are the seeds. Internally it is tubular, and its substance is membranous approaching to gelatinous.



As it was published by J. Sowerby London

CONFERVA radicans.

Creeping Dark Conferva.

CRYPTOGAMIA Algæ.

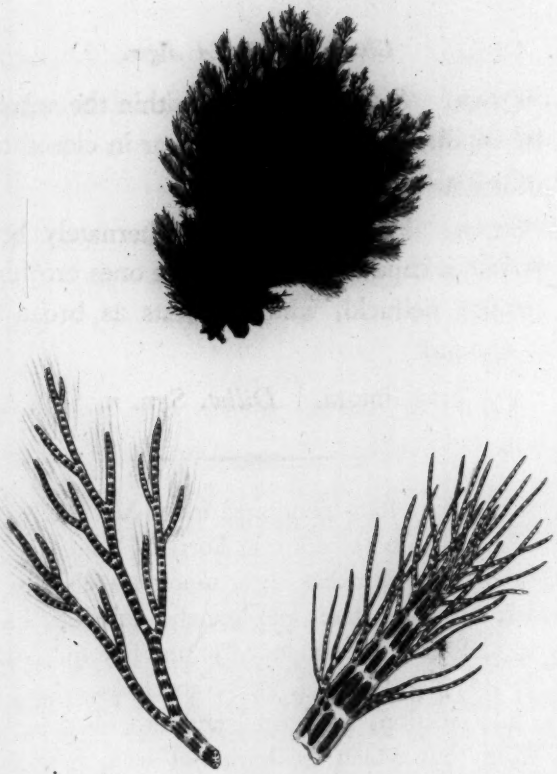
GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Olive brown. Filaments branched, creeping, straight, somewhat rigid; branches obtuse. Joints nearly twice as broad as long.

SYN. Conferva radicans. *Dillw. Syn. n.* 72. *t.* C.

FOUND growing upon rocks covered by the tide at Seaton, Durham, by Mr. William Backhouse, in August 1807.

It forms dense upright tufts, from half an inch to an inch high, of a dark olive-brown colour, and rather rigid texture, at least when dry, in which state it does not adhere to glass or paper. Miss Hutchins, who first found this species in Bantry bay, and from whose dried specimens and drawings Mr. Dillwyn described it, observed the filaments to throw out roots here and there from their base, being truly creeping, though their upper part is erect. That lady alone has seen the fructification, which consists of numerous, minute, lateral, sessile or stalked, globular tubercles. The branches are scattered, capillary, obtuse. Joints almost twice as broad as long, cylindrical, not globular, though some of them here and there are thicker than the rest. Their interstices are pale and pellucid.



As it was published by P. Love 44 Lamb.

CONFERVA fibrata.

Fibrous-branched Conferva.

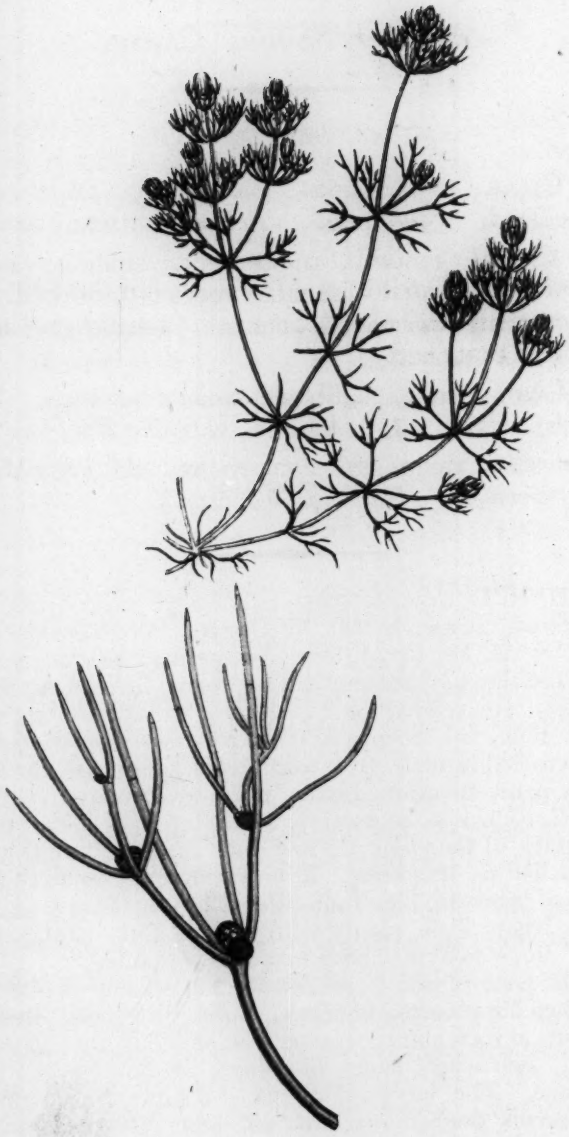
CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* produced within the substance of the capillary or jointed frond, or in closed tubercles united with it.

SPEC. CHAR. Purple, much and alternately branched. Branches capillary; the ultimate ones crowded, very slender, pellucid, white. Joints as broad as long, compound.

SYN. Conferva fibrata. *Dillw. Syn. n.* 159. *t.* G.

FOUND by our often-mentioned friend Mr. Brodie, growing on various submarine plants near Forres. It consists of dense purple tufts, about 2 inches high, much branched in an alternate order, the main stems and branches proving, when magnified, to be formed of compound joints, like those of *C. byssoides, t.* 547, *nigrescens, t.* 1717, and *polymorpha, t.* 1764, and the fructification, as figured and described in Mr. Dillwyn's work, but which we have not seen, appears exactly analogous to that of those species, as far as it is hitherto ascertained; consisting of lateral, solitary, sessile, oval masses of seeds, possibly enclosed in a fibrous involucrum; and we are not without hopes that further observations may authorize the establishment of a separate genus of this most natural and numerous tribe with compound or aggregate joints. The present species is remarkable for the terminations of many of the main branches being pellucid and colourless, as are all the ultimate fine pencil-like divisions, which are crowded about the upper parts of the former.



As it was published by J. Sowerby

CHARA gracilis.

Slender Shining Chara.

MONANDRIA Monogynia.

GEN. CHAR. *Cal.* none. *Cor.* none. *Anthera* tessellated. *Style* none. *Berry* with many seeds.

SPEC. CHAR. Smooth, transparent, shining, without prickles. Lateral branches repeatedly forked; their segments awlshaped, acute. Leaves awlshaped, often branched.

SYN. Chara minor, caulibus et foliis tenuissimis. *Vaill. Act. Paris.* 1719. 18. *n.* 6. *Dill. in Raii Syn.* 133.

Equisetum minus, sub aqua repens, ad genicula polyspermon. *Raii Syn. ed.* 2. 43.

GATHERED Sept. 4, 1809, in a boggy pool in St. Leonard's forest, Sussex, by Mr. W. Borrer. We have the same, (found by M. Du Cros), from Switzerland, and we are persuaded the above synonyms belong to it, though in the *Fl. Brit.* they are referred to *C. vulgaris*, *t.* 336, in its unincrusted state, we having at that time not investigated the plant here delineated. It is confidently presumed, however, that the plant mentioned under the above synonym in Ray's *Hist. Pl. v.* 3. 104, as possibly belonging to it, is rather the naked state of the *vulgaris*, and this mistake, confirmed by Vaillant, led us into error. If a specimen exists in the herbarium of Sherard, who found this *Chara* in Jersey, and calls it "an elegant little plant, with slender little branches and leaves," the synonyms above may be ascertained.

All the parts of our *C. gracilis* are remarkably slender; the stem when dry almost colourless, shining like glass. Branches numerous at each joint, repeatedly subdivided, their segments whorled, awlshaped, acute, not blunt, terminating in a sharp appendage. The leaves, if any exist distinct from branches, which seems doubtful in this and other *Charæ*, are similarly formed. The anthers and germens are sessile, usually together, in the forks of the branches. The dense compound lateral branches give this species the aspect of *C. nidifica*, *t.* 1703, but are differently formed, nor has it any such long simple leaves.

Apl 1 1810 published by J.t Sowerby London.

AVENA planiculmis.

Flat-strawed Oat-grass.

TRIANDRIA Digynia.

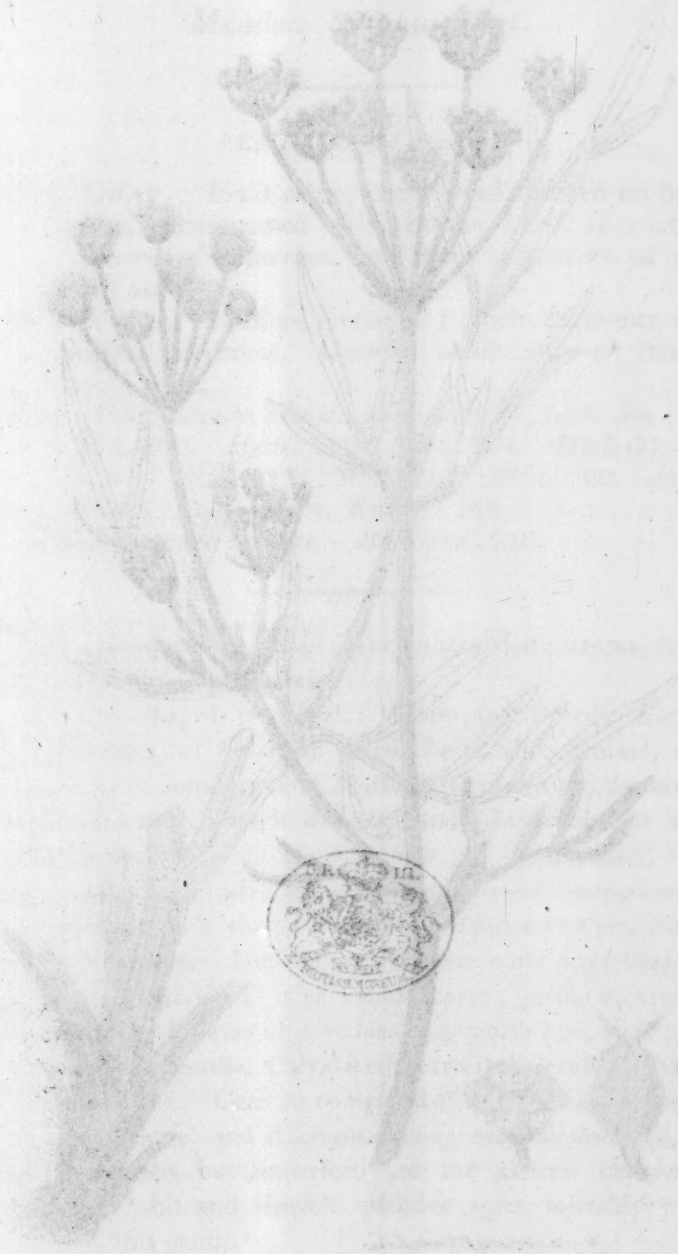
GEN. CHAR. *Cal.* of 2 valves, containing several florets. Outer valve of the *corolla* bearing a twisted awn on its back.

SPEC. CHAR. Panicle erect. Calyx containing about five florets. Receptacles bearded upwards. Leaves naked, finely serrated, with rough sheaths. Stem compressed.

SYN. Avena planiculmis. *Schrad. Germ. v.* 1. 381. *t.* 6. *f.* 2.

DISCOVERED in 1807, by Mr. G. Don, on rocks upon the summits of the highest mountains of Clova, Angusshire. I had but just sent a description of this grass to the Linnean Society, by the name of *A. alpina*, when the 1st vol. of Prof. Schrader's *Flora Germanica*, printed so long ago as 1806, came to my hands. I greet with pleasure this excellent fellow-labourer in European botany, who is no compiler nor copyist, but an original observer, and whose *Flora* is justly announced by his countrymen as one of the very best that has ever appeared.

His long description answers in almost every minutest point to our plant, except that, according to Mr. Don, our roots are tufted, not creeping; nor can the branches of the panicle be called "*capillacei.*" This species most agrees, in general aspect, with *A. pubescens*, *t.* 1640, but is larger in every part. The leaves are never clothed with soft hairs, nor are their edges even, but finely serrated as in *pratensis*, *t.* 1204, from which they differ in their rough, greatly elongated sheaths. The flowers differ from both those species, not only in their much greater size, but in the hairiness of their partial stalk being crowded up into a very dense pencil-like tuft, under each floret, not dispersed over the whole stalk. The roots are perennial, with strong downy fibres. Stem from 2 to 3 feet high, according to Schrader's remark compressed, as well as the sheaths, which I had supposed owing to pressure in drying. Panicle spreading while in full flower only. Glumes shining, and partly pellucid. Awns strong, twice as long as the florets.



Apl 1.1810 published by J.t Sowerby London

PEUCEDANUM Silaus.

Meadow Sulphur-wort.

PENTANDRIA Digynia.

GEN. CHAR. *Fruit* ovate, compressed, striated on both sides, encompassed with a border. *Cal.* of 5 teeth. *General Involucrum* very short. *Flowers* of the disk abortive.

SPEC. CHAR. Leaflets pinnatifid; their segments opposite, decurrent. General involucrum of barely two leaves.

SYN. Peucedanum Silaus. *Linn. Sp. Pl.* 354. *Sm. Fl. Brit.* 305. *Huds.* 116. *With.* 294. *Hull.* 60. *ed.* 2. 80. *Relh.* 111. *Sibth.* 95. *Abbot.* 60. *Jacq. Austr. t.* 15. *Mart. Rust. t.* 128.

Seseli pratense nostras. *Raii Syn.* 216.

NOT unfrequent in meadows, or rather moist pastures, flowering from July to September.

Root tap-shaped, perennial. Whole plant smooth, from 1 to 2 feet high, of a darkish green, fœtid when bruised, and supposed, in some parts of Norfolk, to give a bad flavour to milk and butter, though Schreber and Martyn observe that cattle do not appear in general to eat it. Stem round, furrowed, branched, leafy, tough. Leaves variously compounded and divided, with sharp, decurrent, undivided or pinnatifid, opposite leaflets. Umbels rigid, their outer rays longest. General involucrum of 1 or 2 short leaves; partial of several longer ones. Flowers of a yellow or greenish hue, with purple anthers and pistils. Calyx-teeth scarcely discernible. Petals keeled, inflexed. Germen composed of 2 ribbed hemispheres. Fruit more ovate, and at length oblong, scarcely bordered, so that it answers but imperfectly to the generic character, though its habit and sensible qualities agree tolerably with others of this genus.

May 1 new published by J.t Sowerby London

JUNCUS lampocarpus.

Shining-fruited Jointed Rush.

HEXANDRIA Monogynia.

GEN. CHAR. *Cal.* of 6 leaves, permanent. *Cor.* none. *Caps.* superior, of 3 valves, with 1 or 3 cells. *Seeds* several. *Stigmas* 3.

SPEC. CHAR. Leaves with knotty joints, compressed. Stem without joints. Panicle compound, erect, elongated. Inner calyx-leaves bluntish, bordered. Capsule coloured, varnished.

SYN. Juncus lampocarpus. *Ehrh. Calam. n.* 126. *Davies Tr. of L. Soc. v.* 10. 13.

J. articulatus. *Leers.* 88. *t.* 13. *f.* 6. *With.* 347. *var.* 1.

J. compressus. *Relh. ed.* 1. 142. *Sibth.* 114. *Abbot.* 79.

J. foliis articulosis, floribus umbellatis. *Raii Syn.* 433.

Gramen junceum articulatum palustre humilius. *Moris. sect.* 8. *t.* 9. *f.* 2.

WE readily assent to the corrections of our friends the Rev. H. Davies, and G. R. Leathes, respecting the supposed varieties of *Juncus articulatus*. In the descriptions in *Fl. Brit.*, and at our *t.* 238, we certainly confounded this with *acutiflorus*, *Ehrh. Cal. n.* 66, which that *t.* 238 represents. Linnæus has so entirely confounded all ours, as well as an American species, under his *articulatus*, that it is best to set aside so sweeping a name.

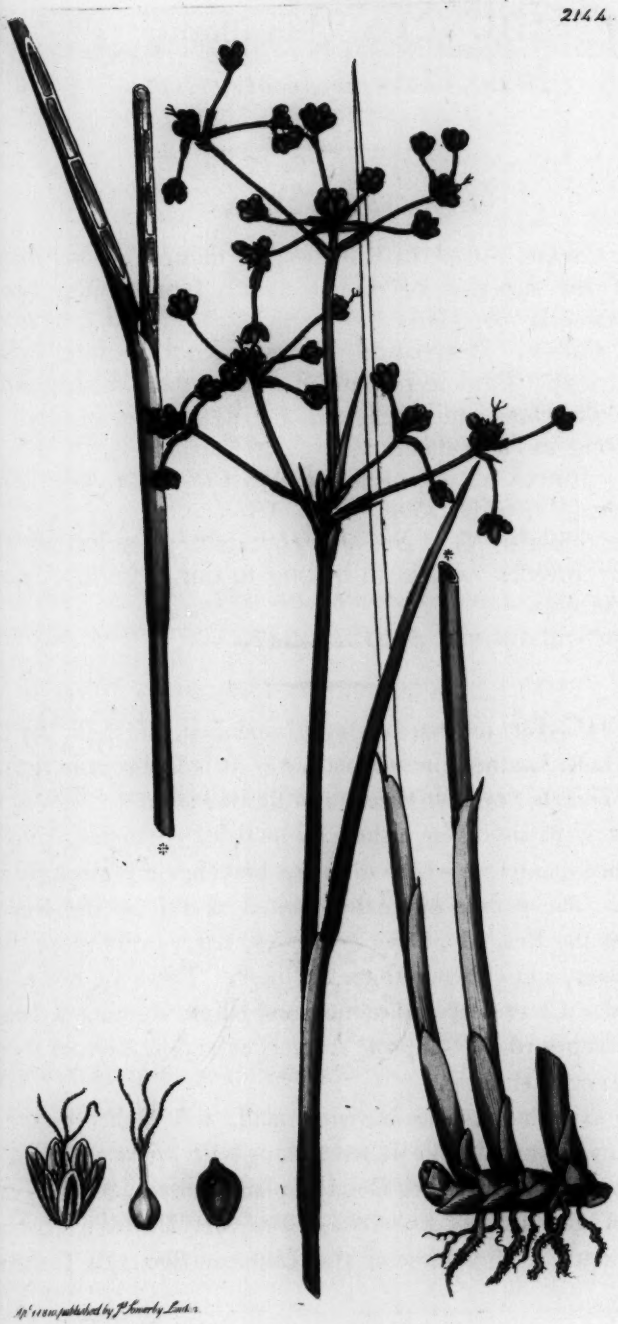
The present is very common in moist pastures, flowering from June to August. Root perennial. Stem not internally jointed, hollow, bearing from 3 to 6 leaves, usually 4 or 5, which are compressed and copiously jointed. Panicle erect; its branches strong, elongated, so that the heads of flowers are remote, one above another on each simple branch. The 3 inner calyx-leaves are rather blunter, with a more evident white membranous edge than the 3 outer. The capsule is remarkable for its great size, dark chocolate hue, and highly polished, as if varnished, surface.

Tab. 238.

JUNCUS acutiflorus.

Sharp-flowered Jointed Rush.

SPEC. CHAR. Leaves with knotty joints, slightly compressed. Stem without joints. Panicle repeatedly forked, dense. Calyx-leaves all sharp-pointed.



Apl 1 1810 published by J. Sowerby Lond.

JUNCUS obtusiflorus.

Blunt-flowered Jointed Rush.

HEXANDRIA Monogynia.

GEN. CHAR. *Cal.* of 6 leaves, permanent. *Cor.* none. *Caps.* superior, of 3 valves, with 1 or 3 cells. *Seeds* several. *Stigmas* 3.

SPEC. CHAR. Leaves and stem with knotty joints, cylindrical. Panicle repeatedly compound; its branches divaricated and reflexed. Calyx-leaves obtuse, as long as the capsule.

SYN. Juncus obtusiflorus. *Ehrh. Calam. n.* 76. *Davies Tr. of L. Soc. v.* 10. 13.

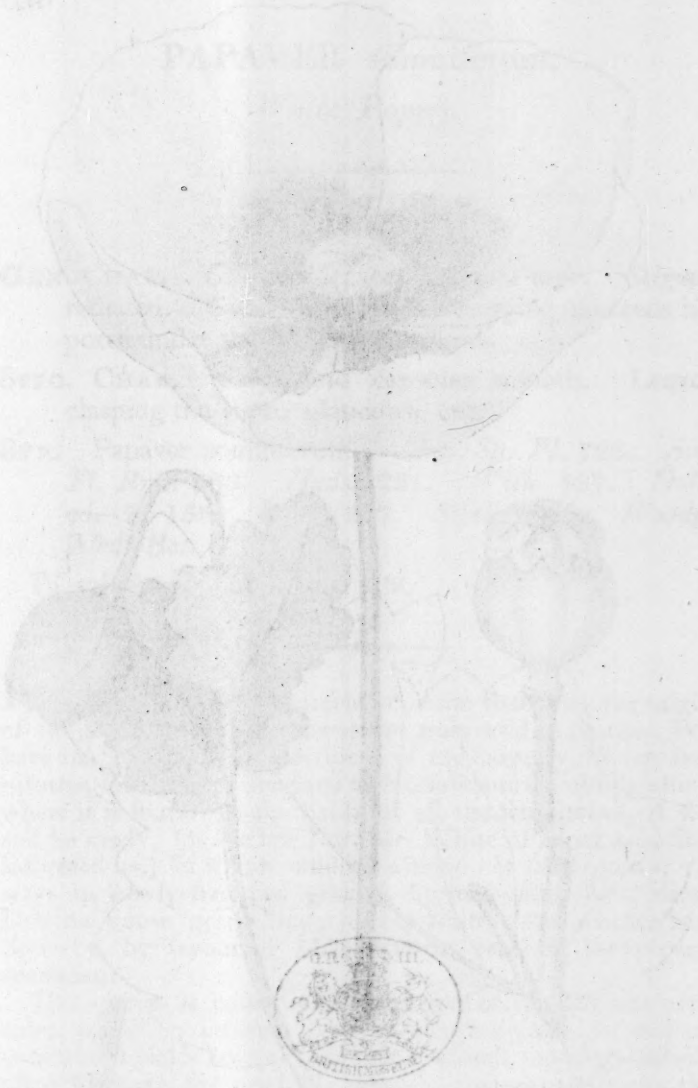
J. articulatus *β*. *Sm. Fl. Brit.* 379; excluding the synonyms, which all belong to our *t.* 288, *J. acutiflorus.*

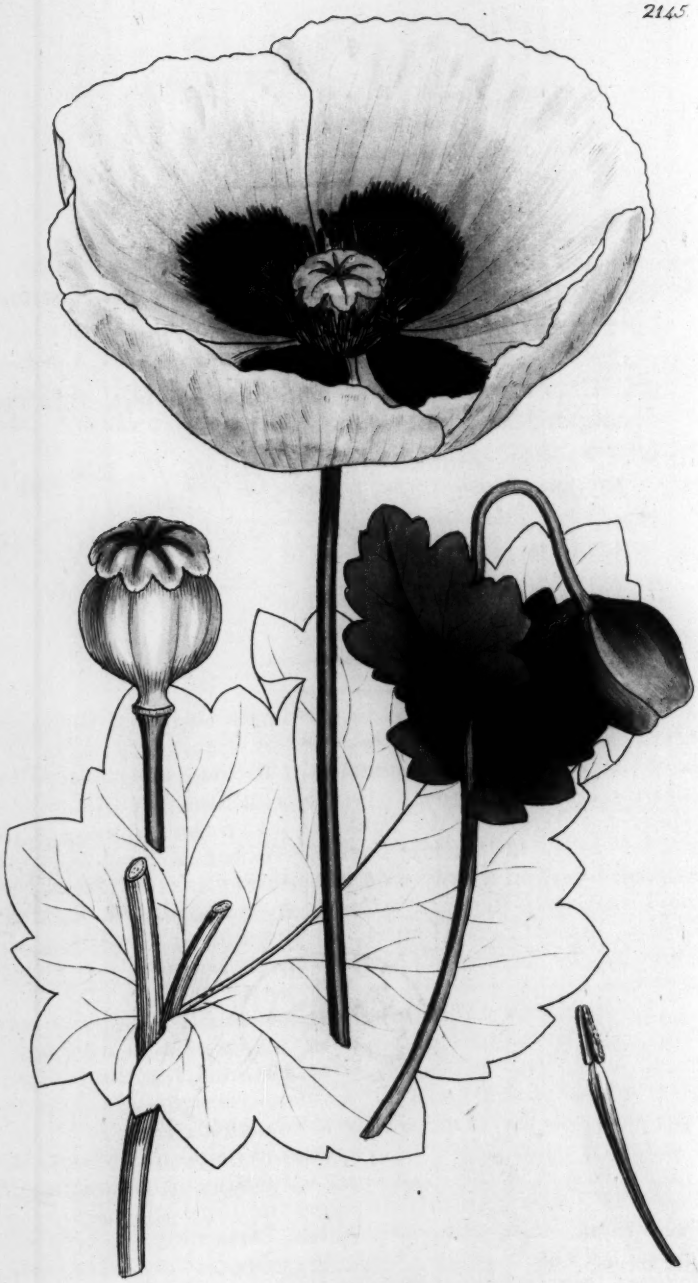
J. articulatus var. *5. With.* 347.

GATHERED in marshes at Limpenhoe, Norfolk, by the Rev. G. R. Leathes, in August last. It is less common than *J. lampocarpus* or *acutiflorus*, and flowers later.

This is easily distinguished by its pale, entangled, much-branched panicles, whose ultimate branches are strongly reflexed. The stem is internally jointed as well as the leaves, and, as the Rev. Mr. Davies observes, never bears more than two leaves, notwithstanding its tallness. These are not compressed. Calyx-leaves all obtuse and elliptical, with a broad membranous edge. Capsule scarcely extending beyond them, light brown, shining.

We have this rush from Switzerland, and Haller certainly confounded it under his *n.* 1323 along with our *acutiflorus*, as did Dillenius by inserting Doody's plant under n. 9 in his edition of Ray's *Synopsis*, 433. See Mr. Davies's accurate paper in the 10th volume of the Linnæan Society's Transactions.





May 1 1810 published by J.t Sowerby London

PAPAVER somniferum.

White Poppy.

POLYANDRIA Monogynia.

GEN. CHAR. *Cal.* two-leaved. *Petals* four. *Stigma* radiated. *Caps.* superior, discharging its seeds by pores under the permanent stigma.

SPEC. CHAR. Calyx and capsules smooth. Leaves clasping the stem, glaucous, cut.

SYN. Papaver somniferum. *Linn. Sp. Pl.* 726. *Sm. Fl. Brit.* 568. *Huds.* 231. *With.* 487. *Hull. ed.* 2. 158. *Relh.* 207. *Sibth.* 166. *Woodv. Med. Bot. t.* 185.

P. sylvestre. *Raii Syn.* 308.

IT has been a generally received opinion that this, the origin of the fine garden poppies, was not truly wild in Britain. We have nevertheless been convinced of the contrary, by repeated information from the low parts of Norfolk and Cambridgeshire, where it is found on the banks of all the fen ditches, if the soil be sandy, (as the late Rev. Mr. White of Hockwold first informed us,) in a truly wild condition. It also grows, always in newly-trenched ground, by road-sides, &c., about Delvine house near Coupar, Angusshire, from whence Mr. Sowerby, by favour of Miss Watson, received the present specimen.

This species is cultivated for the sake of its half-ripe capsules, which in infusion prove a gentle opiate. In warmer countries it yields opium. The root is annual, tapering. Whole plant glaucous and generally smooth, though sometimes the upper part of the stem (which is branched, leafy and 3 or 4 feet high,) bears a few rigid spreading hairs. The leaves are simple, oval or roundish, obtuse, variously cut, embracing the stem. Flowers terminal, drooping in the bud, then erect, short-lived, large, white or purplish, often having a deep violet spot on each petal. Capsule globose. Stigma of many deflexed rays. The seeds are oily, sweet, and not narcotic. It flowers about July.

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Syn. Papaver somniferum. Linn. Sp. Pl. 726. Sm. Fl. Brit. 868. Huds. 281. With. 457. Hall. ed. 2. 158. Relh. 307. Sibth. 268. With. Arab. Bot. c. 18.

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Ap. 1 1810 published by J.t Sowerby London.

BRASSICA Napus.

Rape, Navew, or Cole-seed.

TETRADYNAMIA Siliquosa.

GEN. CHAR. *Cal.* erect, partly cohering. *Seeds* globular. *Pod* nearly cylindrical; the partition prominent, awl-shaped. *Glands* 4.

SPEC. CHAR. Root caulescent, spindle-shaped. Leaves smooth; the upper ones lanceolate, heart-shaped at their base, clasping the stem; lower ones lyrate, toothed.

SYN. Brassica Napus. *Linn. Sp. Pl.* 931. *Sm. Fl. Brit.* 719. *Huds.* 290. *With.* 590. *Hull. ed.* 2. 198. *Relh.* 261. *Sibth.* 204. *Abbot.* 145. *Mart. Rust. t.* 103.

Napus sylvestris. *Raii Syn.* 295.

RAY seems to have scarcely thought the wild navew indigenous; but it is now at least perfectly naturalized, growing in fields, as well as about banks and waste ground, flowering early in summer.

Root biennial, spindle-shaped, forming a kind of trunk above ground. Stem branched, spreading, leafy, round, striated, smooth. Leaves all smooth, of a light green, rather glaucous, especially underneath: the radical ones are lyrate, mostly disappearing as the plant shoots up to flower: those which grow on the stem are numerous, alternate, broader, blunte and more toothed as they are nearer the bottom, the upper ones being more lanceolate and entire; all of them clasp the stem with their dilated rounded base. The calyx is yellowish, and spreads considerably. Petals of a full bright yellow. Pods on slender stalks, spreading, round, beaded, with an angular point.

It is cultivated for the sake of the oil procured by expression from its seeds, the cake which remains affording an excellent manure.

BRASSICA Napus.

Rape, Navew, or Cole-seed.

TETRADYNAMIA Siliquosæ.

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Spec. Char. Root caulescent, spindle-shaped. Leaves smooth; the upper ones lanceolate, heart-shaped at their base, clasping the stem; lower ones lyrate, toothed.

Syn. Brassica Napus. Linn. Sp. Pl. 931. Sm. Fl. Brit. 719. Fluds. 290. With. 590. Mull. ed. 2. 193. Relh. 281. Sibth. 208. Abbot. 145. Mart. Rust. 103.

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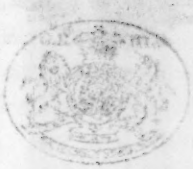


2147

May 1810 published by J.t Sowerby London

LEPRARIA latebrarum.

Grey Cavern Lepraria.

CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* in a powdery substance, loosely clothing a membranous or fibrous crust.

SPEC. CHAR. Grey. Crust fibrous, forming dense cushions. Fructification in small round clusters.

SYN. Lepraria latebrarum. *Achar. Prod.* 7.

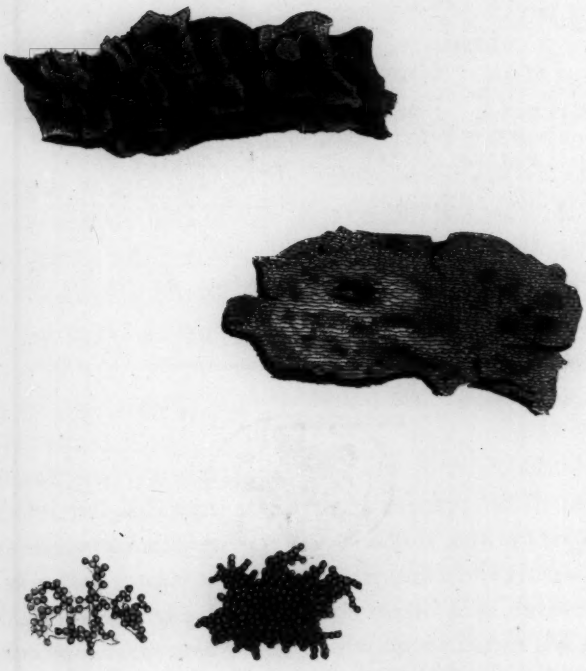
Pulveraria latebrarum. *Achar. Meth.* 2. *Winch. v.* 2. 29.

Byssus cryptarum. *Huds.* 607. *With. v.* 4. 146. *Hull.* 308.

B. albida brevis setacea. *Dill. Musc.* 10. *t.* 1. *f.* 20; exclusive of the Linnæan synonym.

THIS I found, when a young botanist at Edinburgh in 1781, growing on a rock at the Hermitage at Blackford, as well as on several rocks in Rivelston wood. It always grows in such places as the rain cannot reach, and exactly accords with Acharius's name, description and specimens. The colour is a glaucous pale grey, and has remained entirely unchanged. The plant forms light convex soft cushions, easily separable from the rock, their central part being elevated by age, and in a manner vaulted underneath. The whole is a mass of fine fibres, much entangled, intermixed with powdery granulations, the powder rubbing off when touched by the finger, exactly as in the beautiful *L. chlorina, t.* 2038. The inner part is white.

Byssus cryptarum of Linnæus is widely different from this, though Dillenius confounded them.



Marsh. published by J.t Sowerby London.

LEPRARIA botryoides.

Common Green Lepraria.

CRYPTOGAMIA Algæ.

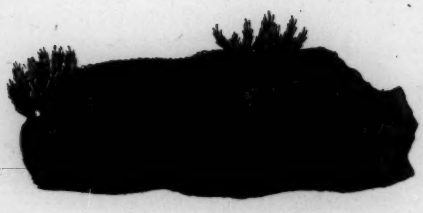
GEN. CHAR. *Seeds* in a powdery substance, loosely clothing a membranous or fibrous crust.

SPEC. CHAR. Crustaceous, clustered, green, somewhat gelatinous, indeterminate, the granulations bead-like.

SYN. Lepraria botryoides. *Achar. Meth.* 6.
Lichen botryoides. *Achar. Prod.* 10. *Hoffm. Enum.* 6. *t.* 1. *f.* 2. *With. v.* 4. 3. *Relh.* 445. *Sibth.* 316.
Byssus botryoides. *Linn. Sp. Pl.* 1639. *Huds.* 609. *Hull.* 308. *Lightf.* 1006. *Fl. Dan. t.* 899. *f.* 3.
B. botryoides saturatè virens. *Dill. in Raii Syn.* 56. *Musc.* 3. *t.* 1. *f.* 5.

THE barks of trees, old posts and rails, garden-pots, &c., are green all the year round with this vegetable, which stains the fingers on the slightest touch, and is in its greatest perfection during the damp months of winter.

The colour is a beautiful bright unchangeable green, only turning yellowish or brownish in decay. The substance an indeterminate, powdery, somewhat gelatinous, crust, on a very slight membranous base. When the green globular particles are for the most part rubbed or scraped away, the remainder, cohering irregularly, in a bead-like manner, are found attached to this membrane. This is all we can discern of its structure, and accords with Hoffmann's representations. That author, copying Lightfoot's typographical error, calls our plant *Creen* Cluster Byssus, but this is one of the most innocent mistakes that could happen to an implicit transcriber. We wish the science were encumbered with no others.



Mayfield published by J. Lee, Lambeth London

LEPRARIA virescens.

Dull-green Lepraria.

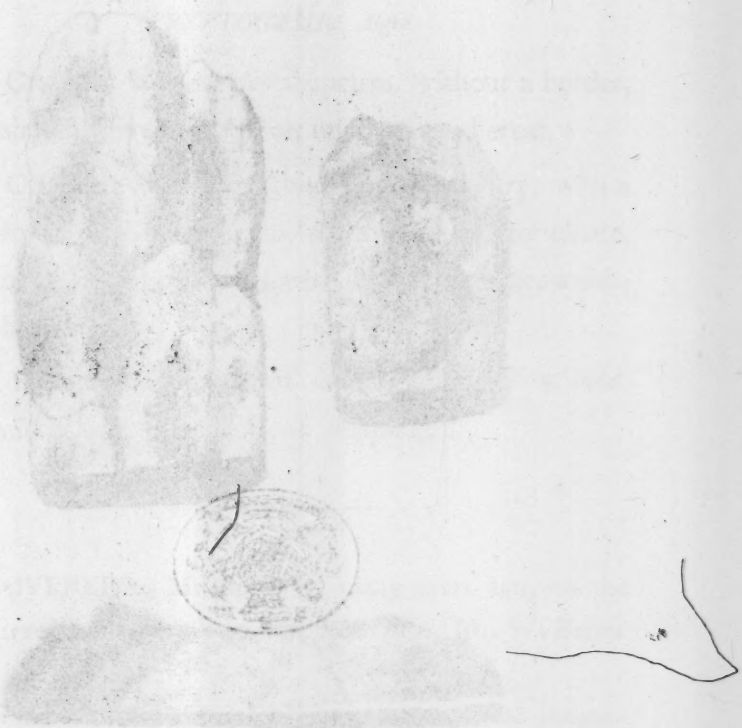
CRYPTOGAMIA Algæ.

GEN. CHAR. *Seeds* in a powdery substance, loosely clothing a membranous or fibrous crust.

SPEC. CHAR. Crustaceous, granulated, continued, somewhat gelatinous; greyish dull green when dry; bright green when wet.

FOUND on the trunks of trees, especially elms, in Sussex, by Mr. W. Borrer, who esteems it a nondescript *Lepraria*. Certainly as no shields have been discovered, we are not warranted to place it elsewhere; nor do we know any thing of the *Lichen* kind, except perhaps some of the *Collemata*, whose crust imbibes moisture so copiously and instantaneously, or becomes so gelatinous, as this.

The crust is perfectly uninterrupted, though not distinctly bordered, at first thin, then considerably thickened, of a dull greenish grey or dark lead-colour when dry, but, when moistened, changing to a deep rich green, in which state the granulations that cover the surface become more tumid and conspicuous. They adhere to a thick uniform base, and are not concatenated like the granules of *L. botryoides*, *t.* 2148, neither do we discern any thing like powdery seeds. We cannot help suspecting that some future discovery of shields may prove this a gelatinous Lichen, or *Collema*; for we know no other *Lepraria* whose colour varies, in the least degree, with moisture.



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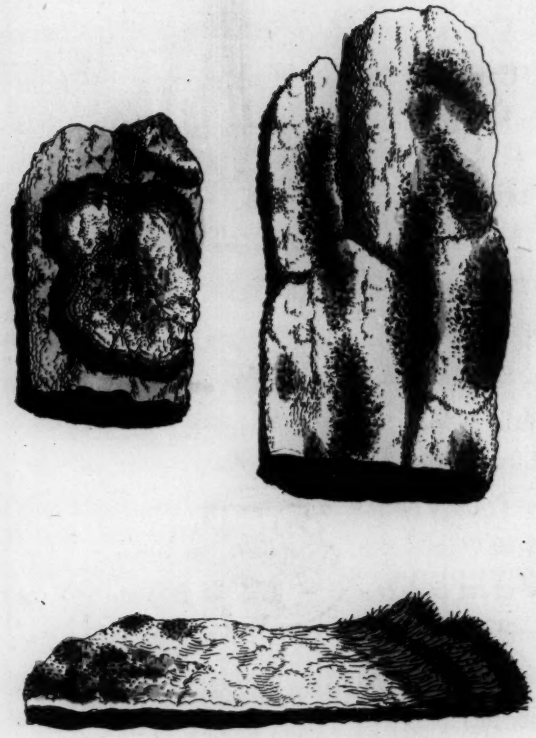


Meteorite published by Ed. Howorth, London.

SPILOMA microclonium.

Fine-branched Spiloma.

CRYPTOGAMIA Algæ.

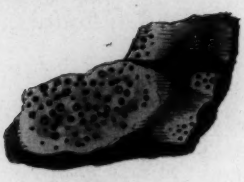
GEN. CHAR. *Receptacles* shapeless, without a border, hairy and powdery, in an uninterrupted crust.

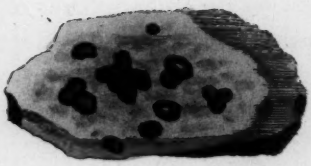
SPEC. CHAR. Crust very thin, leprous, hoary, with a brown edge. Receptacles minute, indeterminate, finely branched, somewhat confluent, brownish-black.

SYN. Spiloma microclonium. *Sm. Fl. Brit. v. 4. ined.*
S. microclona. *Ach. Meth. Suppl. 5.*

DISCOVERED by Mr. Sowerby, many years ago, on the rugged trunks of aged oaks in Windsor forest. Mr. W. Borrer finds it in Sussex.

The white or hoary thin leprous crust overruns the inequalities of the bark, and is terminated by a remarkable brown undulated border. The fructification looks as if snuff, or wood soot, had been sprinkled over the crust, or swept into the clefts of the bark, but when highly magnified, it seems composed of innumerable minute ramifications, that discharge a dark powder when arrived at maturity.





Magazine published by J. Sowerby, London.

SPILOMA tumidulum.

Scarlet Spiloma.

CRYPTOGAMIA *Algæ.*

GEN. CHAR. *Receptacles* shapeless, without a border, hairy and powdery, in an uninterrupted crust.

SPEC. CHAR. Crust thin, continued, whitish, smooth, rather polished. Receptacles minute, convex, red.

SYN. Spiloma? tumidula. *Ach. Meth.* 11. *t.* 1. *f.* 5.
Sphæria gregaria. *Wieg. Obs.* 43. *t.* 2. *f.* 10. *Dicks. Crypt. fasc.* 1. 22. *With. v.* 4. 391. *Hull.* 424. *Relh.* 541. *Sibth.* 404. *Abbot.* 933. *Sowerb. Fung. t.* 375. *f.* 5.
Arthonia tumidula. *Ach. in Schrad. N. Journ. v.* 1. *fasc.* 3. 11.

BY no means uncommon on the smooth barks of trees. The crust is extremely thin, continued, not very distinctly rounded or bordered, even, smooth, whitish, somewhat silvery and polished, scarcely cracked or scaly. Receptacles numerous in the form of scattered irregular warts, a little prominent, their external layer brown, producing innumerable scarlet seeds, which are seemingly entangled in minute fibres of their own colour.

Botanists have differed concerning the natural order of this plant, and even Acharius seems not to be very decided about it, neither was he aware of its synonyms, nor of its being so common a production. We trust we are right in the above references and characters, and that there is no doubt of its generic affinity to our *t.* 2077 and 2078.

May 1 1820 published by J.F. Tuxford Fleet Street London.

LICHEN simplex.

Simple Black Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust olive, thin, smooth, scattered, soon disappearing. Shields scattered or crowded, olive-black; with a thick, elevated, blackish border, at length rugged and contorted.

SYN. Lichen simplex. *Davies Tr. of Linn. Soc. v.* 2. 283. *t.* 28. *f.* 2. *Ach. Prod.* 78. *With. v.* 4. 5. *Hull.* 285.
Lecidea privigna. *Ach. Meth.* 49. *Winch v.* 2. 34.

FOUND either on slate or on sandstone in various mountainous parts of Britain. The crust is thin, smooth, dark olive, soon breaking into small fragments and scaling off, except round the fructification, where, for a time at least, it remains. The shields are numerous, scattered or clustered as it may happen, small, sessile but prominent, of a dark-brownish black; the disk palest, generally concave but sometimes prominent; the border elevated, thick, blacker than any other part, at first even, but soon becoming wrinkled and deformed, and in a more advanced state, as Mr. Davies described it, the shields are altogether black.

We have drawn one of his original specimens on blue slate, and one of Mr. Harriman's from Durham on white sandstone. Our worthy friend is not responsible for what others may have taken for his plant, nor for their erroneous opinions concerning it. Prof. Acharius, in a letter to us, rightly proposes to remove this species from his *Lecidea* to *Parmelia*. We trust it cannot in future be misunderstood, nor is there any real approach in its shields to those proper to a *Gyrophora*.

May 1 1820 published by J.t Sowerby London.

LICHEN thelostomus

Nipple-shielded Lichen.

CRYPTOGAMIA Algæ.

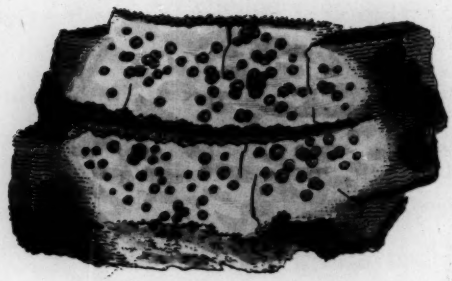
GEN. CHAR. Male, scattered warts,
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust tartareous, thin, continued, brown, minutely cracked. Shields sessile, hemispherical, umbilicated, reddish; with a thick, elevated, even border, of the colour and substance of the crust.

SYN. Verrucaria thelostoma. *Ach. in Winch v.* 2. 44.

OUR liberal friend Mr. Winch, to whom we have often been indebted, has enabled us, by an authentic specimen, to understand this Lichen; and if we differ from him and the learned Acharius in its arrangement, we are open to correction, and our figure, which is very exact, will enable those who are competent to judge. We received this species formerly from the Rev. Mr. Harriman, its original discoverer on whinstone rocks near Eggleston, Durham. No other person seems to have found it, and it was new to Acharius himself. The crust forms roundish patches, and is thin but tartareous, finely cracked when dry, scarcely bordered, of a dirty brown throughout. Shields numerous, not much crowded, small, sessile, hemispherical and rather prominent; their border of the colour and texture of the crust, tumid, elevated, very smooth and entire; the disk small, darkish brown when dry, red or cinnamon-coloured when wet, in which state it is clearly distinguishable from the border, and decidedly conformable to the character of *Lichen*, or the *Parmelia* of Acharius. The centre indeed is a little elevated and umbilicated, which, without dissection, or an attention to the proper border, might give the idea of a *Verrucaria*.

2154.



Mary's Lam published by J.t. Sowerby London

LICHEN albellus.

Cream-coloured Lichen.

CRYPTOGAMIA Algæ.

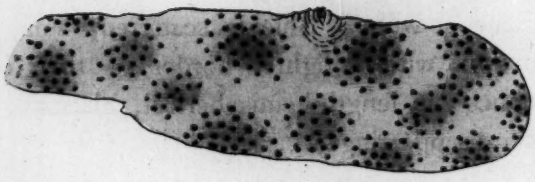
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

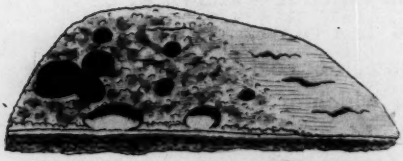
SPEC. CHAR. Crust leprous, thin, continued, cream-coloured, somewhat polished. Shields sessile, whitish-buff, uneven, with a thin, white, wavy border.

SYN. Lichen albellus. *Persoon in Ust. Ann. fasc.* 11. 18.
L. umbilicatus. *Ach. Prod.* 70.
Parmelia albella. *Ach. Meth.* 163.

NOT very uncommon on the smooth barks of young trees. It much resembles *L. rosellus, t.* 1651, except that the colour of the shields is much redder in *rosellus*, and their border, though differently coloured from their disk when young, of the same substance with it, as in *vernalis, t.* 845. We regret that this border is made too much like that of an Acharian *Parmelia* in our *t.* 1651.

The present is a real *Parmelia*. The crust forms roundish patches inseparable from the bark, of a yellowish white or cream-colour, with a degree of lucid polish, or a silvery gloss. Shields numerous, scattered, very neat and pretty, sessile; their disk uneven, concave or convex, pale buff with a slight mealy aspect, and some tinge of flesh-colour when examined with a glass. Their border is perfectly distinct from the disk, and of the substance of the crust, white, thin, even, at length wavy, and finally overtopped by the swelling disk.





June 1 1830 published by J.ᵗ Sowerby London

LICHEN cyrtellus.

Tumid Brown-shielded Lichen.

CRYPTOGAMIA Algæ.

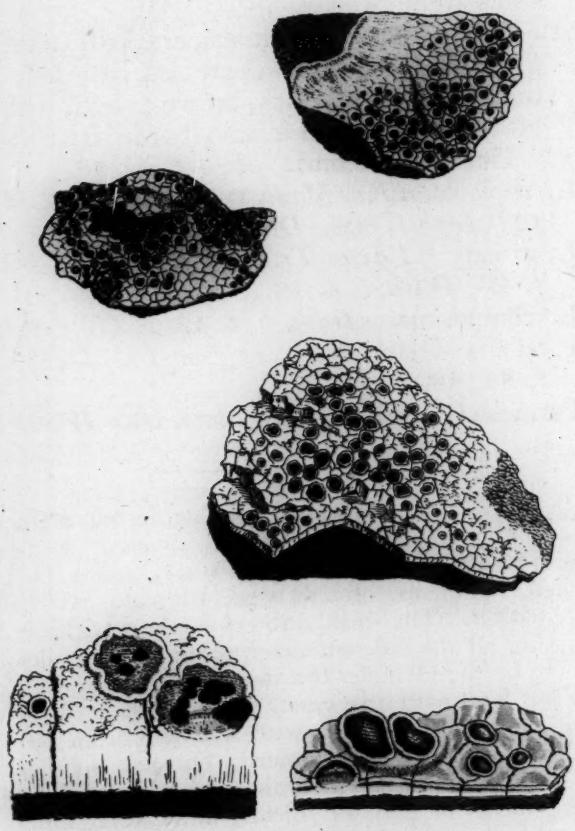
GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust very thin, continued, smoothish, glaucous-white. Shields scattered, small, sessile, brown, with a lighter border of their own substance; at length hemispherical, blackish, the border disappearing.

SYN. Lecidea cyrtella. *Ach. Meth.* 67. *Winch v.* 2. 38?

WE presume this may have been overlooked in an early state for *L. subfuscus. t.* 2109, from which it differs in being a *Lecidea;* and in a more advanced one for *parasemus, t.* 1450, from which it is known by its far less black, less numerous, and less convex shields, whose border when young is almost white, not coal-black. We know not of any other species with which it can be confounded. We have this Lichen from Mr. Turner, Mr. G. Don and Mr. Borrer, found in their several neighbourhoods, so that it appears to be not very rare.

The crust is thin, but constant and continued; rather glaucous and mealy when young; subsequently smoother and of a pure white. Shields small, scattered, sessile; their young disk flat, narrow, light-brown, with a thick, smooth, still lighter-coloured border of the same substance, which becomes blackened, thinner, and at length nearly obliterated by age, when the disk grows singularly convex, and brownish-black. Some shields are lobed or compound, as in *L. subfuscus, t.* 2109, c.



June 1st 1810 published by Jas Sowerby London.

LICHEN Glaucoma.

Wall-eyed Lichen.

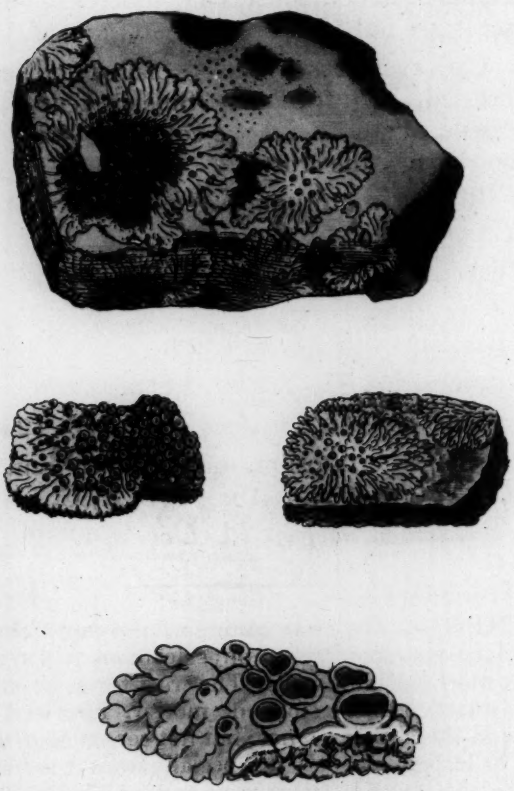
CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust tartareous, cracked, uneven, hard, greyish-white. Shields depressed, crowded; at length tumid, deformed, black, brown or buff, with a strong glaucous tinge, and a wavy border from the crust.

SYN. Lichen Glaucoma. *Ach. Prod.* 56.
L. rupicola. *Linn. Mant.* 132? *Huds.* 525. *With. v.* 4. 13? *Lightf.* 806. *Dicks. H. Sicc. fasc.* 15. 22.
L. varians. *Davies Tr. of L. Soc. v.* 2. 284. *t.* 28. *f.* 3. *With. v.* 4. 18.
L. compositus. *With. v.* 4. 13. *t.* 31. *f.* 2, bad.
Patellaria Glaucoma. *Hoffm. Pl. Lich. v.* 3. 9. *t.* 52, 53.
Parmelia Glaucoma. *Ach. Meth.* 160. *Winch v.* 2. 50.

FREQUENT on whin-stone, or slate, in mountainous countries. The very hard, continued, distinctly bordered crust follows all the inequalities of the stone, and is itself uneven, cracked, tartareous, of a dirty greyish white externally; pure white within. The shields are extremely remarkable, and account for all the different descriptions and paradoxical relations to be found under the above references. When young they are level with the crust, scarcely bordered; when older tumid, unequal, crowded, with a border from the substance of the crust more or less elevated. The disk is either blackish, lead-coloured, of a horny brown, or a brightish buff, in different shields or parts of shields, but always, unless rubbed, clothed with a fine glaucous powder or efflorescence. In some cases it appears compound or proliferous. Our synonyms, except where a mark of doubt is subjoined, are founded on original specimens. *L. rupicola* of Linnæus cannot be ascertained; we therefore prefer the excellent name of Acharius. We cannot assent to the opinion of some of our learned friends that *L. sulphureus*, *t.* 1186, or *crenulatus*, *t.* 930, or *Swartzii* of Acharius, are not perfectly distinct from this, nor do we found our opinion on trivial observation.



Jan. 1st 1810 published by Jas. Sowerby London

LICHEN murorum.

Yellow Wall Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

SPEC. CHAR. Crust circular, plaited and lobed, close-pressed, bright yellow. Shields central, crowded, sessile, flattish, orange-coloured, with a smooth border like the crust.

SYN. Lichen murorum. *Ach. Prod.* 101. *Hoffm. Enum.* 63. *t.* 9. *f.* 2.

L. flavescens. *Huds.* 528. *Hull.* 292. *Relh.* 459. *Sibth.* 324.

L. flavicans. *With. v.* 4. 25.

L. candelarius β. *Lightf.* 811.

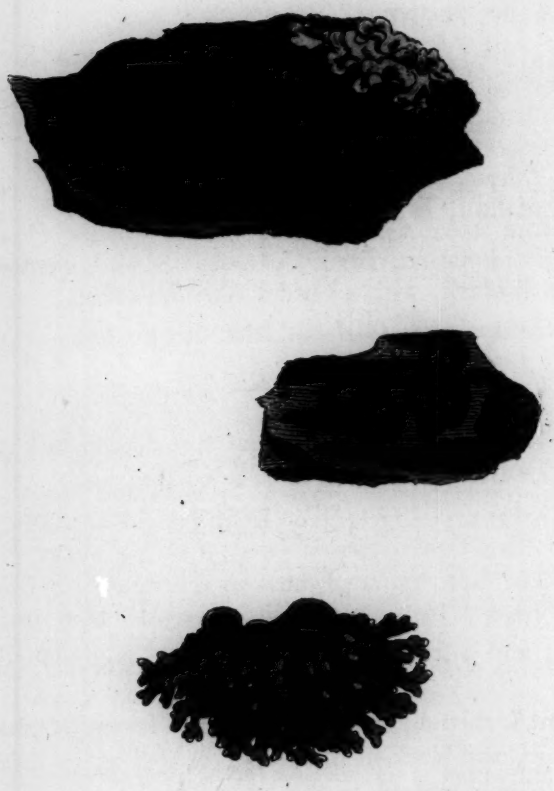
L. candelaris. *Wulf. in Jacq. Coll. v.* 3. 124. *t.* 6. *f.* 1.

Lichenoides crustosum, orbiculis et scutellis flavis. *Dill. Musc.* 136. *t.* 18. *f.* 18, A, C.

Psora saxicola. *Hoffm. Pl. Lich. v.* 1. 82. *t.* 17. *f.* 3.

NOTHING can be more common, nor more obvious, than this golden-coloured Lichen on calcareous rocks and stones, and the mortar of flint walls. The crust forms circular patches, closely attached to the stone or mortar, furrowed lobed and crenate in the circumference, but not separable in distinct segments or leaves. This part especially is of the richest golden yellow; the centre is either paler and whitish, or greenish and olive-coloured. Here the numerous shields are crowded, and sometimes they alone, scattered and robbed of their crust, remain. They are small, sessile, with a smooth border of the substance of the crust, and, like that, internally white; their disk is deeper coloured than any other part, flat, at length rather convex.

There has been great confusion between this well marked species and *candelarius*, *t.* 1794, *vitellinus*, *t.* 1792, and *elegans*, Ach. Prod. 102, nor are we, on the other hand, certain that some others are truly distinct from it.



June 1 1810 published by Th. Tegg Cheapside London.

LICHEN elæinus.

Orbicular Olive Lichen.

CRYPTOGAMIA Algæ.

GEN. CHAR. Male, scattered warts.
Female, smooth shields or tubercles, in which the seeds are imbedded.

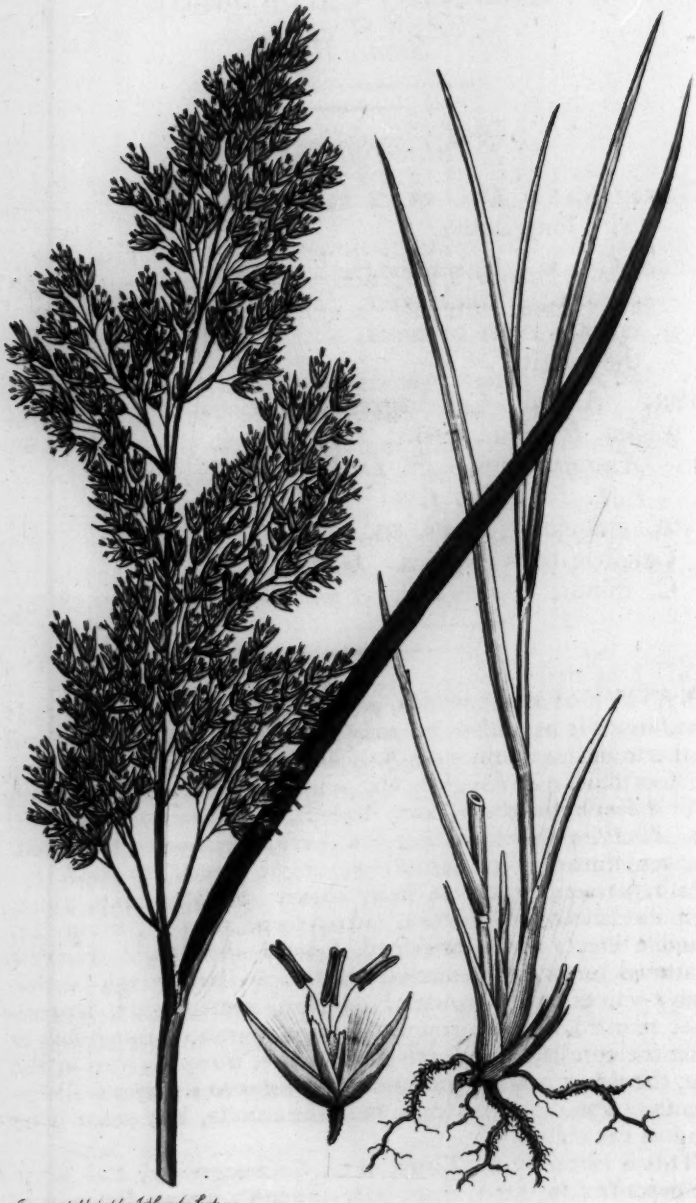
SPEC. CHAR. Imbricated, depressed, stellated, membranous, dark greenish olive; smoothish, and of the same colour, beneath; its segments close-pressed, pinnatifid, linear, obtuse. Shields central, brownish-black, with a border like the crust.

SYN. Parmelia elæina. *Ach. Meth. Suppl.* 45.

THIS, as Mr. Borrer observes, is not rare on the barks of elms and fruit-trees, nor much more so on flint walls. We are obliged to that gentleman for the specimens here exhibited. We have for some time remarked the same on walls and trees about Norwich, but hesitated how to distinguish it from *cycloselis*, *t.* 1942. These specimens, compared with those of Acharius, and with his description, have at length entirely satisfied us.

The present Lichen differs from *cycloselis* in its smaller size, thinner texture, and blackish olive hue, as well as in being much more closely pressed to the bark, like a crustaceous Lichen, and in the almost total want of fibres on its under side, so that nothing like a fringe is discernible at the edges of the narrow, linear, abrupt, zigzag segments which compose the circumference. Pale scattered mealy warts are seen here and there towards the middle, and still more in the centre appear several small shields, with a thick, inflexed, smooth border of the substance of the leaf, and a flat blackish-brown disk.

R III



June 1 1810 published by Jos Sowerby London

ARUNDO Calamagrostis.

Small Reed.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Florets* surrounded with long down.

SPEC. CHAR. Calyx single-flowered, longer than the corolla. Panicle erect, diffuse. Flowers scattered, erect. Awn terminal, short. Down longer than the corolla.

SYN. Arundo Calamagrostis. *Linn. Sp. Pl.* 121. *Sm. Fl. Brit.* 146. *Hull. ed.* 2. 35. *Relh.* 44. *Knapp. t.* 96. *Fl. Dan. t.* 280. *Schrad. Germ. v.* 1. 214. *t.* 4. *f.* 4. *Ehrh. Calam.* 84.

A. epigejos. *Huds.* 54.

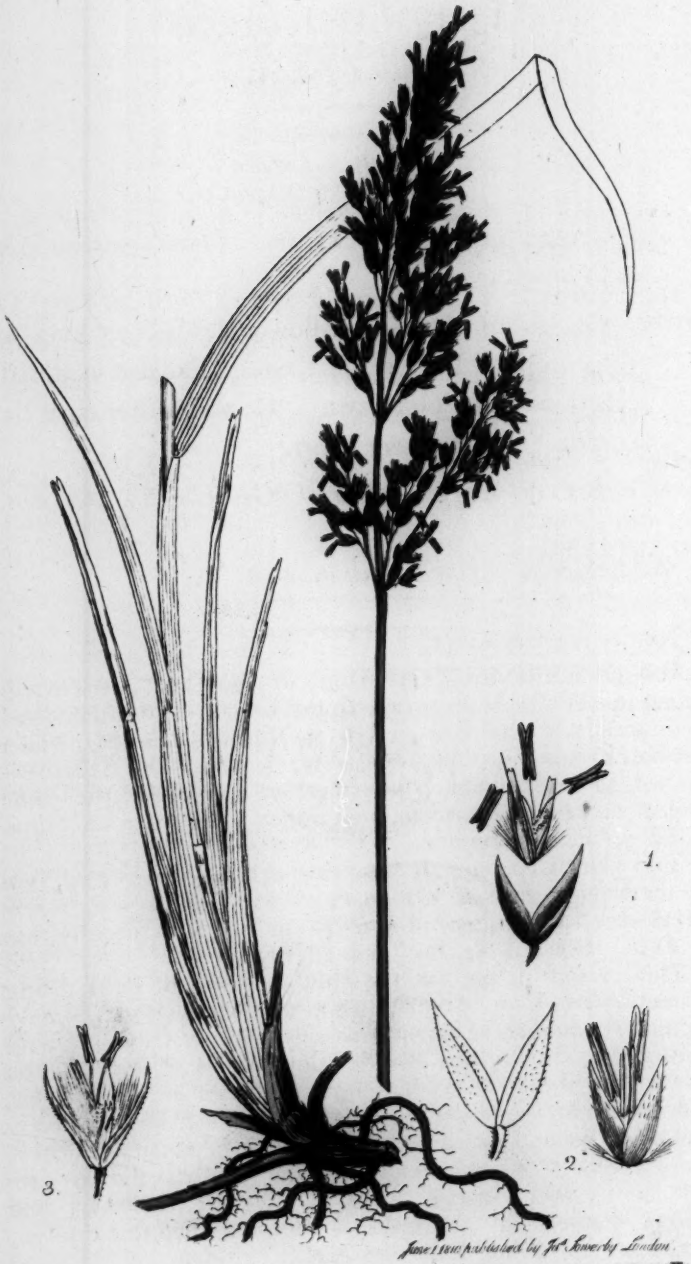
Calamagrostis epigejos. *With.* 123.

C. minor, glumis ruffis et viridibus. *Raii Syn.* 401.

NATIVE of moist woods, and fenny places, flowering early in July. It is rather an uncommon plant, chiefly noticed hitherto in the counties of Norfolk, Cambridge, and Lincoln.

Root fibrous, or slightly creeping, perennial. Stems erect, 3 or 4 feet high, round, very smooth, much more slender than in *A. Phragmites* or *epigejos*, leafy, sometimes branched. Leaves linear, pointed, narrow, bright green, roughish beneath, sometimes a little hairy above. Sheaths long, close. Stipula lanceolate, obtuse, often torn, smooth, decurrent. Panicle erect, much branched, loosely spreading. Flowers scattered, erect, very numerous, on capillary rough stalks. Calyx-valves bright brown or purplish, nearly equal, lanceolate, pointed, keeled, roughish, slightly ribbed, much longer than the corolla, whose valves are white, unequal, torn at the top, the larger bearing a minute awn between its terminal segments. The down is longer than the corolla, but scarcely so long as the calyx.

This is certainly the Linnæan *A. Calamagrostis*, and what we described in our *v.* 6. *p.* 403, though a wrong figure was there annexed to the description, an error which we shall correct by a new page of letterpress to *t.* 403.



June 1 1816 published by Jos. Sowerby London.

ARUNDO stricta.

Smallest Close Reed.

TRIANDRIA Digynia.

GEN. CHAR. *Cal.* of 2 valves. *Florets* surrounded with long down.

SPEC. CHAR. Calyx single-flowered, full as long as the corolla. Panicle erect, close. Flowers scattered, erect, with a dorsal awn. Down shorter than the corolla. Stipula very short.

SYN. Arundo stricta. *Schrad. Germ. v.* 1. 215. *t.* 4. *f.* 5.

A. neglecta. *Ehrh. Calam.* 118.

DISCOVERED by Mr. G. Don, in June 1807, in a marsh called the White Mire, a mile from Forfar. We had but just communicated this discovery to the Linnæan Society, under Ehrhart's name *neglecta*, when we received Dr. Schrader's 1st vol. of his valuable *Flora*, and we now prefer the name he had, unknown to us, adopted from a publication of Timm which we have never seen.

This plant is perennial, flowering in June. It is next akin to the foreign *Agrostis arundinacea*, which is likewise surely an *Arundo*, as Linnæus originally, and Schrader recently, has made it. See *A. sylvatica*, Schrad. n. 8.

The present is by far the smallest British Reed, being scarcely 2 feet high. It differs from *A. Calamagrostis, epigejos* and *Phragmites* in having the calyx simply acute, not with elongated points. The corolla moreover is as long as the calyx, (but the down is shorter,) its glumes abrupt, jagged, and coloured, the larger bearing a short dorsal awn, scarcely projecting beyond the calyx. Root creeping, perennial. Stem simple, with 2 joints, smooth like the sheaths. Leaves narrow, acute, rough above. Stipula very short, abrupt, and entire. Panicle of a purplish or bronze-coloured brown, somewhat resembling luxuriant *Melica cærulea*.

G.R
III.